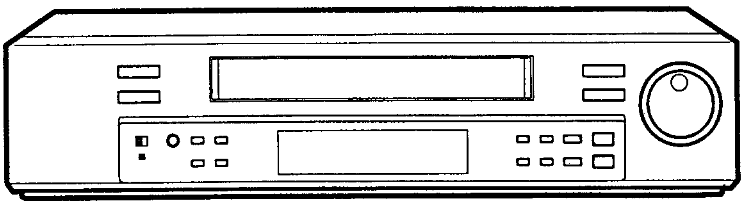
1998

MITSUBISHI

Service Manual

TIME LAPSE VIDEO CASSETTE RECORDER



VHS
PAL

MODEL
HS-7300E
HS-7300E(B)

Only cassettes marked VHS can be used with this video cassette recorder.

SPECIFICATIONS

Tape Format	: VHS 1/2" width high-density video cassette tape
Power Source	: 100~230V±10% AC ; 50/60Hz
Power Consumption	: Approx. 20W
Television System	: 625lines, 50fields PAL type colour signal
Video Recording System	: 2 rotary heads, azimuth helical scanning system
Luminance Signal	: Frequency modulation recording
Colour Signal	: Low frequency conversion, sub-carrier phase shift recording
Audio Recording System	: 1 full track head, recording system
Erase	: 1 full track head
Linear Audio Track	: 1 track
Fast Forward / Rewind Time	: Approx. 140sec. with E-180 cassette
Alarm Recording Time	: Timed: 15sec./ 30sec./ 45sec./ 1min./ 2min./ 5min./ 10min. Manual 1: Until the alarm reset switch is switched on. Manual 2: Until the alarm set switch is switched off.
Video Input	: 1.0Vp-p, 75Ω unbalanced BNC plug
Audio Input	: –8dBs, 50kΩ unbalanced RCA plug
Video Output	: 1.0Vp-p, 75Ω unbalanced BNC plug
Audio Output	: –6dBs, 1kΩ unbalanced RCA plug
Operating Temperature	: 41°F to 104°F
Relative Humidity	: MAX. 80%
Weight	: Approx. 4.5kg.
Dimensions	: 425 (W) × 93 (H) × 315 (D) mm
Display Position	: In any position
Timer Programme	: 8 programs-daily start and stop time for one week
Display Format	: Display mode 1: (Day)-(Month)-(Year) (Hour) : (Minute) : (Second) (Alarm recording no.) : Display mode 2: (Day)-(Month)-(Year) (Day of week) (Alarm recording no.), (Hour) : (Minute) : (Second) (Recording mode)
Battery Back Up	: Lasts 31 days
Deck	: U Deck

Tape Speed and Recording Time (with E-180 cassette)

Mode	Time	Speed (Drive)	Recording interval
3H (SP)	3hrs	23.39mm/sec (Continuous)	every field
6H (LP)	6hrs	11.70mm/sec (Continuous)	every field
L18H (LP)	18hrs	3.90mm/sec (Continuous)	3 fields
L24H (SP)	27hrs	2.60mm/sec (Continuous)	9 fields
24H (SP)	26hrs	0.180sec/field (Intermittent)	Only in playback
48H (SP)	51hrs	0.340sec/field (Intermittent)	17 fields
48H (LP)	54hrs	0.180sec/field (Intermittent)	9 fields
72H (SP)	75hrs	0.500sec/field (Intermittent)	25 fields
72H (LP)	78hrs	0.260sec/field (Intermittent)	13 fields
96H (SP)	99hrs	0.660sec/field (Intermittent)	33 fields
96H (LP)	102hrs	0.340sec/field (Intermittent)	17 fields
120H (SP)	123hrs	0.820sec/field (Intermittent)	41 fields
120H (LP)	126hrs	0.420sec/field (Intermittent)	21 fields
168H (SP)	171hrs	1.140sec/field (Intermittent)	57 fields
168H (LP)	174hrs	0.580sec/field (Intermittent)	29 fields
240H (SP)	243hrs	1.630sec/field (Intermittent)	81 fields
240H (LP)	246hrs	0.820sec/field (Intermittent)	41 fields
360H (SP)	363hrs	2.420sec/field (Intermittent)	121 fields
360H (LP)	366hrs	1.220sec/field (Intermittent)	61 fields
480H (SP)	483hrs	3.220sec/field (Intermittent)	161 fields
480H (LP)	486hrs	1.620sec/field (Intermittent)	81 fields
720H (SP)	723hrs	4.820sec/field (Intermittent)	241 fields
720H (LP)	726hrs	2.420sec/field (Intermittent)	121 fields
960H (SP)	963hrs	6.420sec/field (Intermittent)	321 fields
960H (LP)	966hrs	3.220sec/field (Intermittent)	161 fields
0H	---	(Intermittent)	---

- Weight and dimensions shown are approximate.
- Design and specifications are subject to change without notice.

MITSUBISHI ELECTRIC

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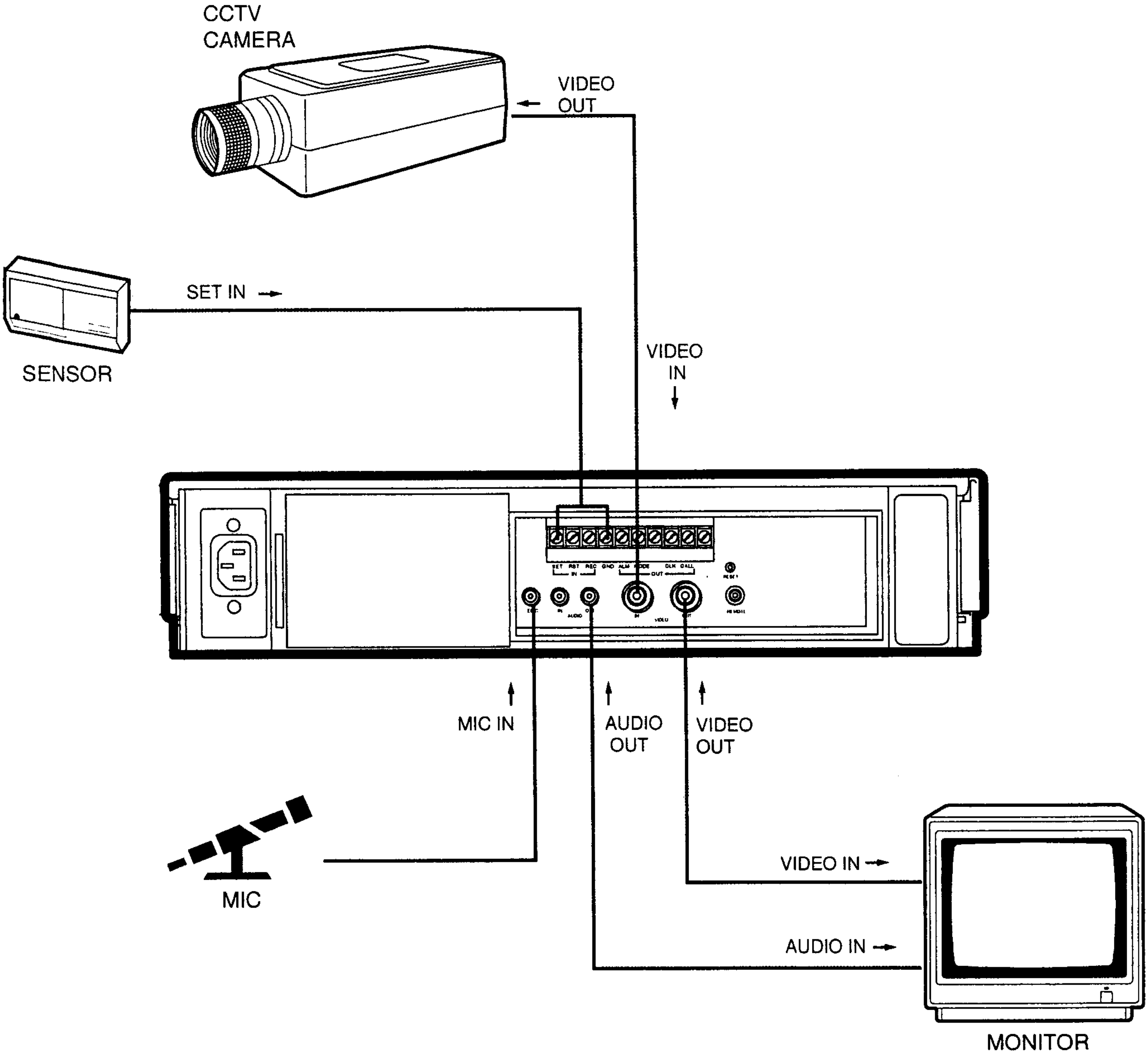
CONNECTING WITH OTHER EQUIPMENT


CCTV
CAMERA
VIDEO
OUT
SET IN
SENSOR
VIDEO
IN
SET
RST
REC
GND
ALM
MODE
CLK
CALL
IN
OUT
RESET
IN
AUDIO
OUT
VIDEO
MIC IN
AUDIO
OUT
VIDEO
OUT
MIC
VIDEO IN
AUDIO IN
MONITOR

VERTICAL ADJUSTMENT (Correcting picture vibration at the top and bottom)

The picture vibration can be reduced or eliminated by the following steps.

1. If the vibration occurs in still, slow motion, fast playback (x2) or normal playback in 24H - 960H or 0H mode, playback a tape which is recorded in 3H or 6H mode with this VCR and press the PAUSE button.
   If the vibration occurs during normal playback in L18H or L24H mode, playback a tape in each playback mode.
2. Press the VERTICAL ADJUST (+) or (-) button to reduce or eliminate the picture vibration.

MONITOR TO BE CONNECTED

- Connection with a CCTV monitor (for surveillance) is recommended.
- Connecting with some monitors may cause picture vibration and/or picture distortion at the top or bottom of the image during still or normal playback.
  A domestic Television Monitor may be unable to provide a stable picture without vibration and distortion.

CHECK PROCEDURE OF ELAPSED TIME

```
<MAINTENANCE>
    POWER LOSS LIST
     ALARM LIST
     ALL MENU INITIALIZE
     POWER LOSS LIST CLEAR
     ALARM LIST CLEAR

    <REPEAT REC TIMES>              0
    <ELAPSED TIME>                   0H
```

1. Press the DISPLAY button to display the "MAIN MENU".
2. Turn the JOG to select the "MAINTENANCE".
3. Turn the SHUTTLE to right.
4. The "<ELAPSED TIME>" is displayed.
5. Press the DISPLAY button.

Note: The "<ELAPSED TIME>" counts up to 89,999 hours.

WARNING INDICATION

Self-Detection Function

This model has a function to detect internal malfunctions.
If any malfunction occurs inside the set, the state of malfunction is displayed on the fluorescent display or the monitor.
Press the COUNTER-RESET button on the front panel for 10 seconds or more to indicate the latest malfunction. The number that indicates the type of the malfunction is displayed together with the warning indication "WRNG" on the fluorescent display.
Again press the COUNTER-RESET button for 10 seconds or over to cancel the indication.

No.	FLUORESCENT DISPLAY	MONITOR	MALFUNCTION	STATE	REMEDY
1	End	TAPE END	TAPE END DURING RECORDING	Tape stops at the tape end during recording.	Rewind the tape or replace it by a new one.
3	---	NO SIGNAL	LOSS OF VIDEO SIGNAL INPUT	Leak of video signal continues for 5 secs or over during recording.	Input the video signal or stop recording. *1
4	CLOG	---	Clogging	Clogging at the video head can not be removed.	Remve the clogging or stop recording.
6	---	CHECK	LOADING MOTOR SYSTEM TROUBLE	Deck is on the wrong position during recording or when recording starts.	Disassemble for repair.
7	---	CHECK	CAPSTAN MOTOR SYSTEM TROUBLE	Capstan motor does not rotate during recording.	Disassemble for repair.
8	---	CHECK	DRUM MOTOR SYSTEM TROUBLE	Drum motor does not rotate during recording.	Disassemble for repair.
5,9	---	CHECK	LOOSE TAPE	Tape is suffered from troubles such as looseness during recording.	Disassemble for repair.
10	---	---	SHORT CIRCUIT	Power supply (SW5V, SW12V) short-circuit.	Disassemble for repair.

*1: If the indication "WRNG" does not disappear even after the appropriate countermeasure, disassemble the set for repair.

1. TAPE END

<FIRST TIME SET UP>

The indication appears for the following conditions;
item "TAPE END", on the screen, is set to "STOP",
alarm is input once or more times while set to "ALM PROT", and
timer recording is implemented while it is set to "REWIND".

2. LOSS OF VIDEO SIGNAL INPUT

When the video signal is turned off during recording for 5 seconds or more, the "NO SIGNAL" appears on the monitor.

3. LOADING MOTOR SYSTEM TROUBLE

When a loading problem is detected, the intended mode is selected after returning the tape to the "CASSETTE-IN" position and loading it again. If the problem is not eliminated after this operation is repeated twice, the indication "CHECK" Appears on the monitor.

4. LOOSE TAPE

When looseness or transport error is detected, the following operation is made after the tape is returned to the "CASSETTE-IN" position and loaded again;

- When SP mode is selected for recording, the original mode is selected after recording at 3H mode for 5 secs.
- When LP mode is selected for recording, the original mode is selected after recording at 6H mode for 15 secs.

If the problem is not eliminated after this operation is repeated two times, the indication "CHECK" appears on the monitor.

5. CLOGGING

When the clogging at the video head can not be removed during the intermittent recording for more than 48H at the SP mode or more than 120H at the LP mode by operating the cleaning 4 times, Switch the SP mode to the LP mode or the LP mode to the SP mode for recording.

CONTROL INPUT/OUTPUT SIGNAL

No.	SIGNAL	Terminal	USAGE
1	SET INPUT	SET IN	Start alarm recording
2	RESET INPUT	RST IN	Finish alarm recording / Adjusting on screen
3	RECORD INPUT	REC IN	Start recording or series recording
4	MODE OUTPUT	MODE OUT	Indication of VCR selected mode
5	ALARM OUTPUT	ALM OUT	Output while alarm recording is under way
6	CLOCK OUTPUT	CLK OUT	Command camera switching
7	CALL OUTPUT	CALL OUT	External warning device or for series recording

Clock output cycle during recording (CLK OUT)

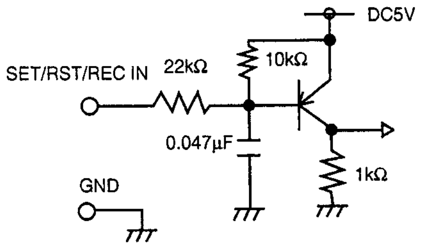
The clock output cycle during recording is variable according to the specified value of " CLOCK OUT " in REAR TERMINAL of MAIN MENU. Refer to the below table.

	Clock output cycle during recording												
	Specified value of CLOCK OUT in REAR TERMINAL of MAIN MENU												
Dividing Ratio / Mode	1	2	3	4	5	10	15	20	25	30	50	60	FILED
3H/6H	If REC is selection : (1/FF signal) × dividing ratio. If T/L REC is selected : Fixed at "H" level.												If REC is selected : (1/FF signal) × 1/2. If T/L REC is selected : Fixed at "H" level.
Except 3H/6H	Time lapse cycle × dividing ratio.												Time lapse cycle. (dividing ratio fixed at 1.)

CONTROL INPUT/OUTPUT SIGNALS AND CIRCUITS

■ SET/ RST/ REC IN terminals (screw)

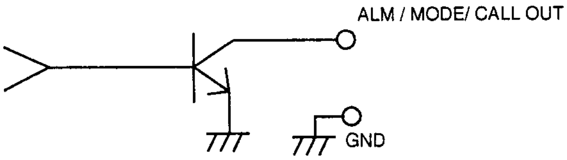
Active: When input terminals are short-circuited to GND or "L" level voltage (0 - +1.6V) applied.
Time for active: 0.1 sec or over.
Non active: Open the input.


DC5V
SET/RST/REC IN
22kΩ
10kΩ
0.047μF
1kΩ
GND

<Interface circuit inside the VCR>

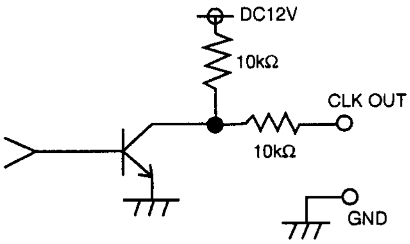
■ ALM/ MODE/CALL OUT terminals (screw)

Active: "L" level voltage (0 - +0.4V) output; max. drive current 50mA(+5V DC)/ 10mA(+24V DC)
Non active: Open; max. voltage +24V DC


ALM / MODE/ CALL OUT
GND

<Interface circuit inside the VCR>

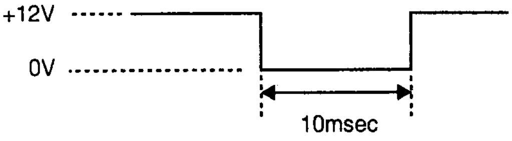
■ CLK OUT terminal (screw)


DC12V
10kΩ
CLK OUT
10kΩ
GND

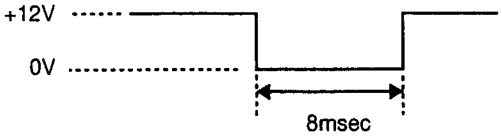
<Interface circuit inside the VCR>

CLK OUT signal

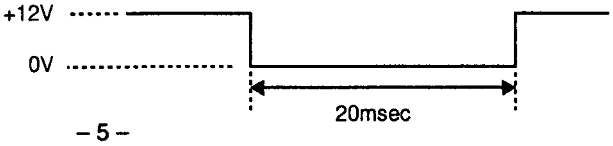
- When "F" is selected in REC of CLOCK OUT mode in 3H or 6H recording.



- During recording in L18H - 960H recording mode.

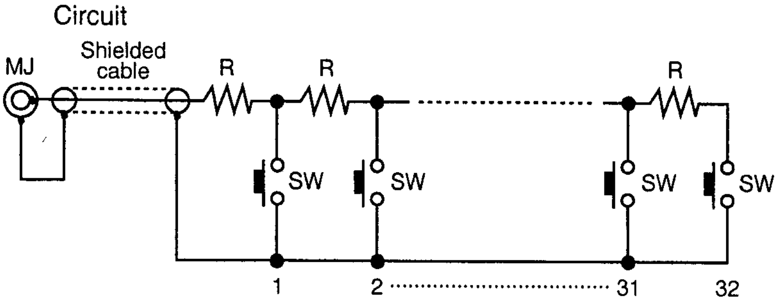


- When except "F" is selected in REC of CLOCK OUT mode in 3H or 6H recording.



CONTROL INPUT/OUTPUT SIGNALS AND CIRCUITS

■ REMOTE jack


Circuit
MJ
Shielded cable
R
R
R
SW
SW
SW
SW
1
2
31
32

1)Resistor R:	Metal film resistor 1/4W 33kohms ±1%, temperature factor ±100ppm/°C.
2)Button switch:	Momentary, ON resistor 200ohms or under.
3)Connector MJ:	Miniature jack, 2.5mm in diameter, comply with JISC6560.

Operational conditions

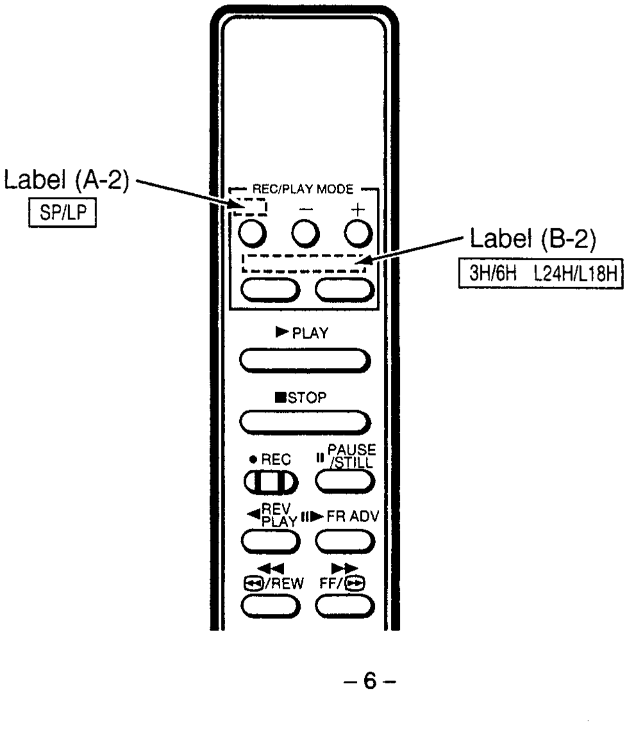
1)Isolation resistor:	200Mohms or over (in connector MJ)
2)Floating capacity:	0.1μF or under (in connector MJ).
3)Environmental temperature:	5-40°C (common with VCR).
4)Relative temperature:	Max. 80% (common with VCR).

Remote control switch functions

Position	Function	Position	Function	Position	Function	Position	Function
1	STOP	9	3H/6H	17	POWER ON/OFF	25	DOWN POSITION/SHIFT
2	RECORDING	10	L24H/L18H	18	REVERSE FRAME SHIFT	26	UP POSITION/SHIFT
3	PAUSE	11	48H (SP/LP)	19	TIME DATE SEARCH	27	CLEAR
4	PLAYBACK	12	72H (SP/LP)	20	INDEX SEARCH	28	START/END
5	REVERSE PLAYBACK	13	120H (SP/LP)	21	(–)DISPLAY/SET	29	(–)REC/PLAY MODE
6	FORWARD FRAME SHIFT	14	240H (SP/LP)	22	(+)DISPLAY/SET	30	(+)REC/PLAY MODE
7	FAST FORWARD	15	0H (SP/LP)	23	LEFT POSITION/SHIFT	31	SKIP SEARCH
8	REWIND	16	SP/LP	24	RIGHT POSITION/SHIFT	32	TIMER RECORDING

■ Remote Control (optional)

The optional Remote Control (R-7100) provides remote operation of the VCR.
Before using the remote control, put the label on it as shown in Fig.


Label (A-2)
SP/LP
Label (B-2)
3H/6H L24H/L18H
REC/PLAY MODE
–
+
► PLAY
■STOP
● REC
II PAUSE /STILL
◄REV PLAY
II► FR ADV
◄◄ /REW
►► FF/

MAINTENANCE GUIDE

[○ : CLEANING ● : CHECK & ADJUSTMENT ◎ : REPLACEMENT □ : GREASING]

SPECIFICATION	HOUR										
	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	10,000
ASSY DRUM *1	○	○	○	○	○	○	○	◎	○	○	○
DRUM MOTOR	○	○	○	○	○	○	○	○	○	○	◎
FE HEAD	○	○	○	○	○	○	○	○	○	○	◎
A/C HEAD UNIT	○	○	○	○	○	○	○	○	○	○	◎
TAPE PATH POLES *2	○	○	○	○	○	○	○	○	○	○	○
CAPSTAN SHAFT	○	○	○	○	○	○	○	○	○	○	○
REEL DISK	○	○	○	○	○	○	○	○	○	○	◎
VIDEO HEAD *3	○	◎	○	◎	○	◎	○	◎	○	◎	◎
CAPSTAN MOTOR								◎			
PINCH ARM UNIT								[◎]			
LOADING BELT								[◎]			
REEL BELT								[◎]			
BCP2 UNIT								◎			
REEL GEAR UNIT (SP, TU)								◎			
MAIN BRAKE (SP,TU)								◎			
TENSION BELT UNIT								◎			
IDLER UNIT								◎			
CLEANING ROLLER UNIT								◎			
BRUSH *3								◎			
LOADING MOTOR ASSY											◎
LOADING MECHANISM											□
SERVO CIRCUIT *4								●			
Interchangeability Adjustment of the Mechanism								●			

*1 Means the UPPER DRUM ASSY and LOWER DRUM ASSY.
*2 Refer to 1. Cleaning the DECK of MECHANICAL ADJUSTMENT AND REPLACEMENT.
*3 Included in the UPPER DRUM ASSY of the ASSY DRUM.
The exchange every 4,000hrs is recommended only for 0Hr mode used and over L24Hr mode used.
*4 Included in the PCB-MAIN.

Note : 1. Check tape running functions and performance such as picture and sound concerning each mode at inspection.
2. Disassembly for repair is required when the operating time exceeds approx. 10,000hrs.
3. [◎]:Replace with new part at 4,000hrs or three years.

DISASSEMBLY

1. Removal of Top Cover

1. Remove the four Top Cover fastening screws (ⓐ) shown in Fig. 1 and remove the Top Cover in the direction shown by the arrow.

2. Removal of Front Panel

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the Jog Dial and the Shuttle Ring.
3. Unfasten the seven catches (ⓑ) shown in Fig. 1 and remove the Front Panel in the direction shown by the arrows.
4. Disconnect the Connector JJ shown in Fig. 1.

Note: Before installing the Front Panel, make sure that the lever is on the lower position. Push the cassette door open and install it.

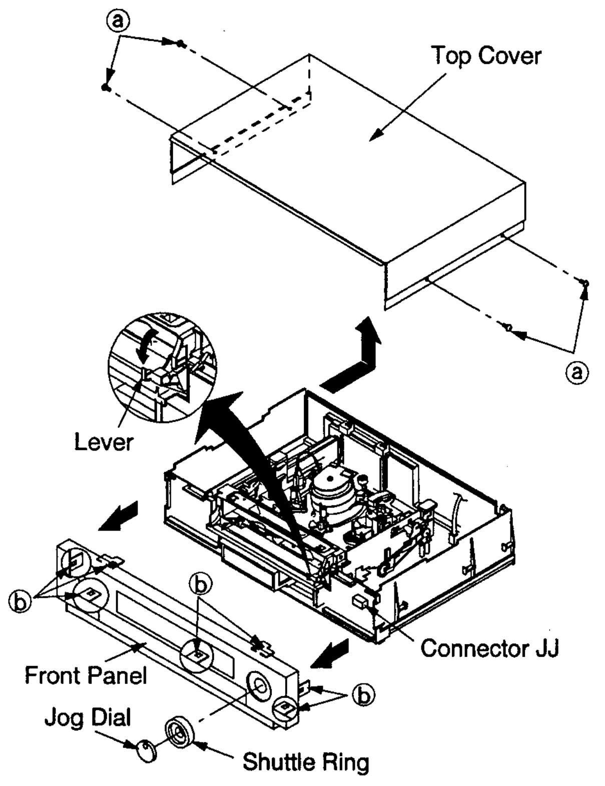


Fig. 1

3. Removal of Bottom Panel

1. Turn the set upside down as shown in Fig. 2.
2. Remove the three fastening screws (ⓐ) shown in Fig. 2.
3. Push the one hook (ⓑ) toward inside. Slide the Bottom Panel backward to remove it, with taking care of the four catches (ⓒ).

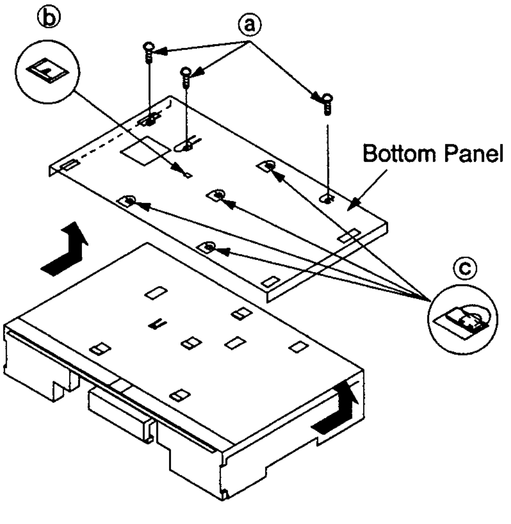


Fig. 2

4. Removal of DECK ASSY

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the Front Panel.
   (Refer to Para. 2 of the DISASSEMBLY.)
3. Remove the three screws (ⓐ) and the screw (ⓑ) shown in Fig. 3.
   (When the Bottom Panel has been removed in Para. 3 of the DISASSEMBLY,remove the three screws (ⓐ) .)

Note: Remove the screw with care because the Bottom Panel will deform if it is remains.

4. Remove the three screws (ⓒ) shown in Fig. 4 and raise the Shield Plate upward to remove it.
5. Remove the one screw (ⓓ) shown in Fig. 4 and remove the Ground Lead Wire.

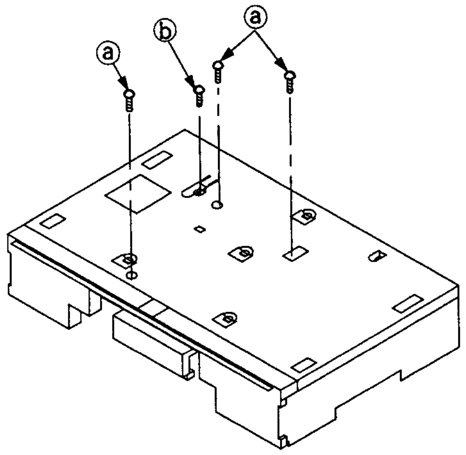


Fig. 3

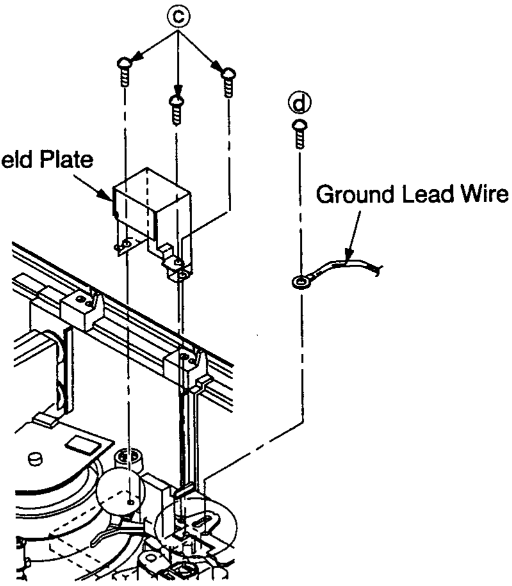


Fig. 4

6. Remove the five screws (ⓔ) shown in Fig. 5.
7. Disconnect the Connectors MA, MD, MF, MH and ML.
8. Raise the DECK ASSY upward to remove it, paying attention to the Connector MC located under the DECK ASSY.

Note: During installation of DECK ASSY, check Connector DD which may be removed by side force.
Do not use the Spacer to raise the DECK ASSY.

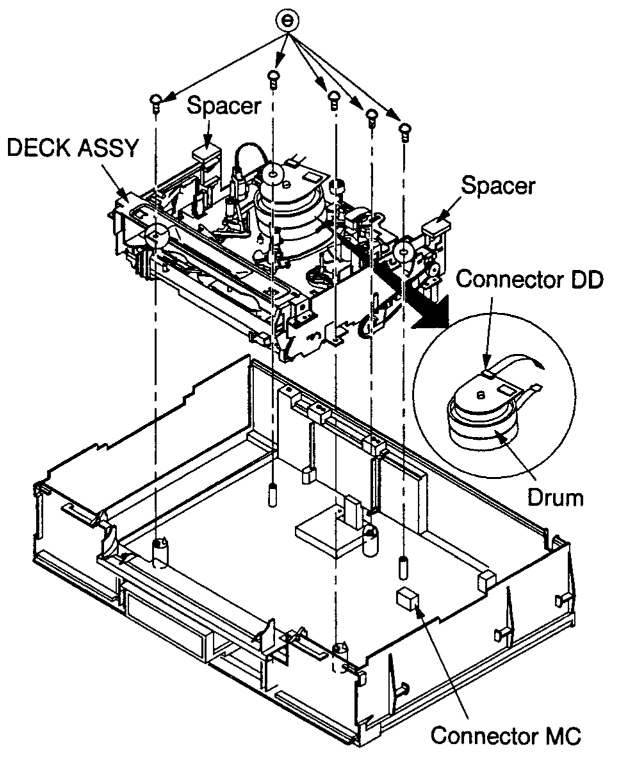

ⓔ
Spacer
DECK ASSY
Spacer
Connector DD
Drum
Connector MC

Fig. 5

5. Removal of Insert Guide

1. Remove the DECK ASSY.
   (Refer to Para. 4 of the DISASSEMBLY.)
2. Remove the two screws (ⓐ) shown in Fig. 6.
   Raise the Insert Guide upward to remove it.

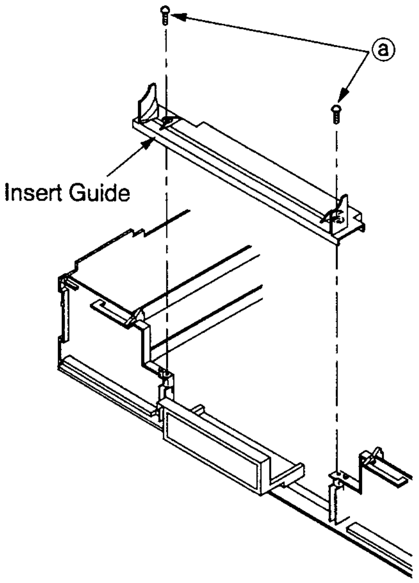

ⓐ
Insert Guide

Fig. 6

HOW TO EXECUTE CIRCUIT BOARD SERVICE

CAUTION: BEFORE ATTEMPTING TO REMOVE OR REPAIR ANY PCB, UNPLUG THE POWER CORD FROM THE A.C. SOURCE.

LOCATION OF PRINT CIRCUIT BOARDS

Note :

- Take caution when removing flat cables to prevent any contact problems.
- Connect and disconnect the flat cables at right angles to the connectors and make sure that they are completely secured.
- After servicing the PCB, reconnect the flat cable and leads.

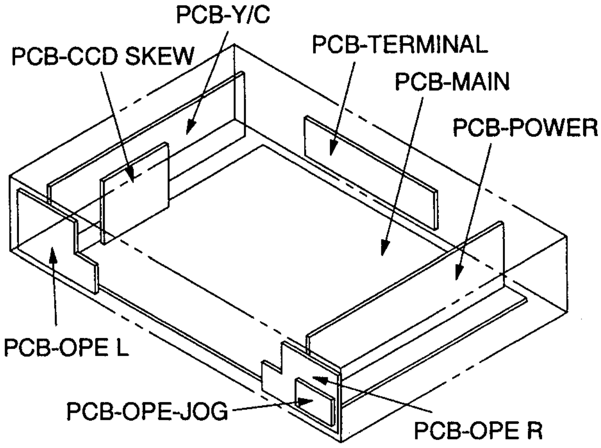

PCB-Y/C
PCB-CCD SKEW
PCB-TERMINAL
PCB-MAIN
PCB-POWER
PCB-OPE L
PCB-OPE-JOG
PCB-OPE R

Fig. 7

1. PCB-OPE L

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the Front Panel.
   (Refer to Para. 2 of the DISASSEMBLY.)
3. Unfasten the one catch (ⓐ) shown in Fig. 8 and rotate the PCB-OPE L in the direction shown by arrow (ⓑ) and remove it in the direction shown by arrow (ⓒ).

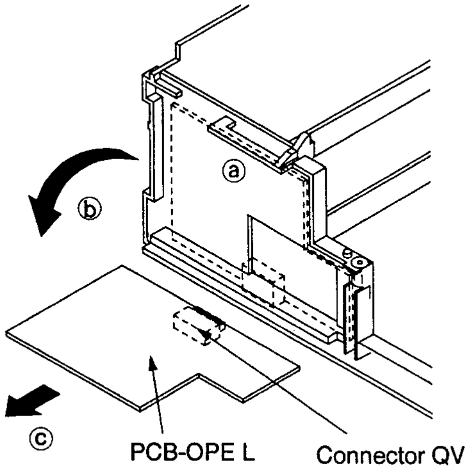

ⓐ
ⓑ
ⓒ
PCB-OPE L
Connector QV

Fig. 8

2. PCB-OPE R

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the Front Panel.
   (Refer to Para. 2 of the DISASSEMBLY.)
3. Unfasten the one catch (ⓐ) shown in Fig. 9 and rotate the PCB-OPE R in the direction shown by arrow (ⓑ) and remove it in the direction shown by arrow (ⓒ).

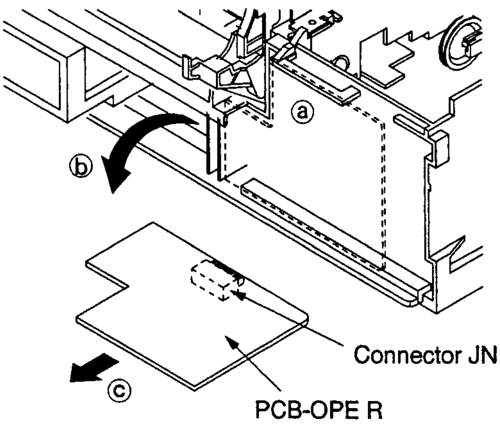

ⓐ
ⓑ
ⓒ
Connector JN
PCB-OPE R

Fig. 9

3. PCB-JOG

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the Front Panel.
   (Refer to Para. 2 of the DISASSEMBLY.)
3. Remove the three PCB-OPE-JOG fastening screws (ⓐ) shown in Fig. 10 and remove the PCB-OPE-JOG.

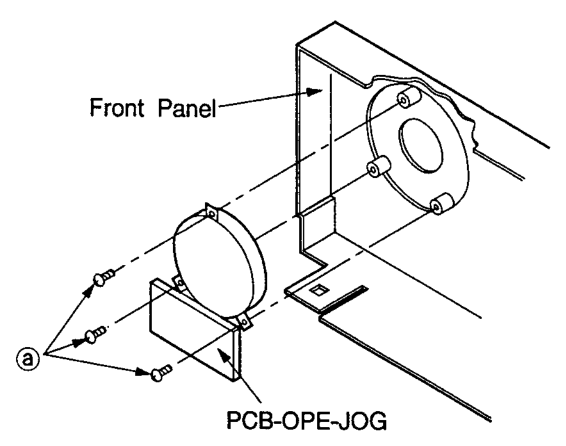

Front Panel
ⓐ
PCB-OPE-JOG

Fig. 10

4. PCB-Y/C

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the one screw (ⓐ) shown in Fig. 11 and risethe Holder to remove it.
3. Disconnect the Connectors SR,SC and SS.
4. Remove the PCB-Y/C.

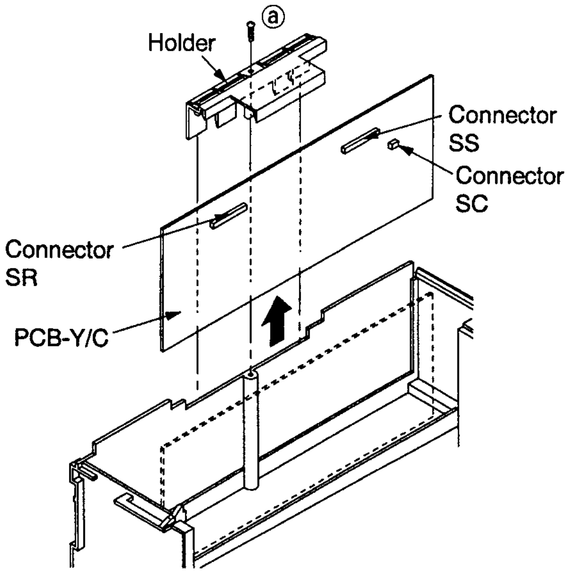

ⓐ
Holder
Connector SS
Connector SC
Connector SR
PCB-Y/C

Fig. 11

5. PCB-POWER

1. Remove the Top Cover.
   (Refer to Para. 1 of the DISASSEMBLY.)
2. Remove the two screws (ⓐ) shown in Fig. 12 and raise the Holder to remove it.
3. Remove the one screw (ⓑ) shown in Fig. 12 and remove the Ground Lead Wire.
4. Remove the one screw (ⓒ) shown in Fig. 12 and remove the Power Cover.
5. Remove the one screw (ⓓ) shown in Fig. 12 and raise the PCB-POWER to remove it.

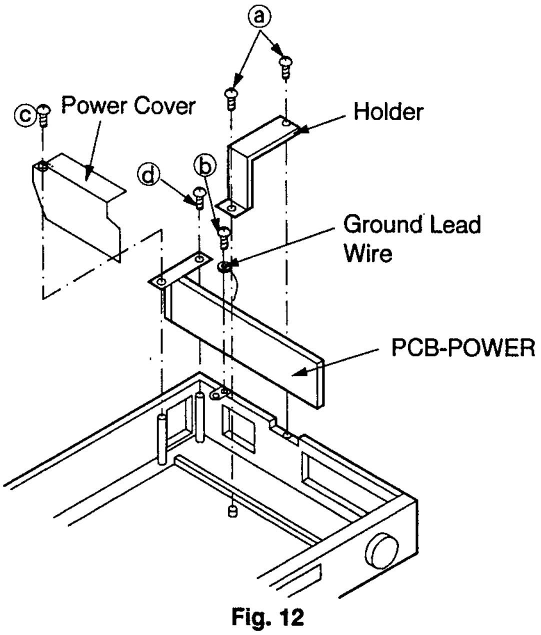

ⓐ
ⓒ
Power Cover
Holder
ⓓ
ⓑ
Ground Lead Wire
PCB-POWER

Fig. 12

◪ Service of Transistor (Q901)

1. Disconnect the power plug.
2. Remove the one fastening screw (ⓓ) shown in Fig. 13.

Note: Check that transistor (Q901) is connected to the Heat Sink before turning the power on. If the power is turned on without installing the Heat Sink, Q901 can be damaged.

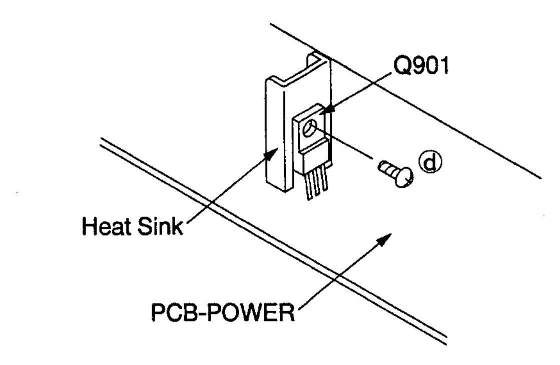


Fig. 13

6. PCB-MAIN

6-1. Removal of PCB-MAIN

1. Remove the DECK ASSY.
   (Refer to Para. 4 of the DISASSEMBLY.)
2. Remove the Insert Guide.
   (Refer to Para. 5 of the DISASSEMBLY.)
3. Remove the PCB-OPE R and PCB-OPE L.
   (Refer to the preceding paragraph.)
4. Remove the three screws (ⓐ) shown in Fig. 14.

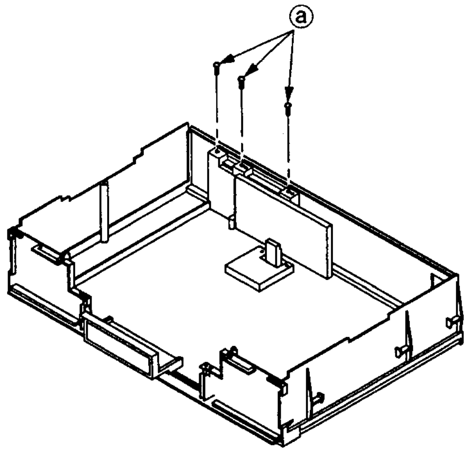


Fig. 14

◪ Service of Head Amp block

1. Unsolder the four soldered points of the Shield Case shown in Fig. 15 and remove it.
2. Unsolder the three soldered points of the Shield Plate shown in Fig. 15 and remove it.

Note: Before checking the operation, mount the Shield Case and the Shield Plate in their original position. If not connected, beat or picture malfunction may appear.

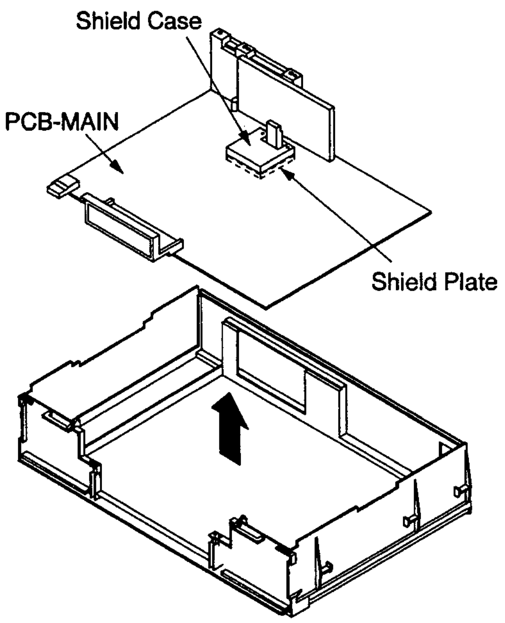
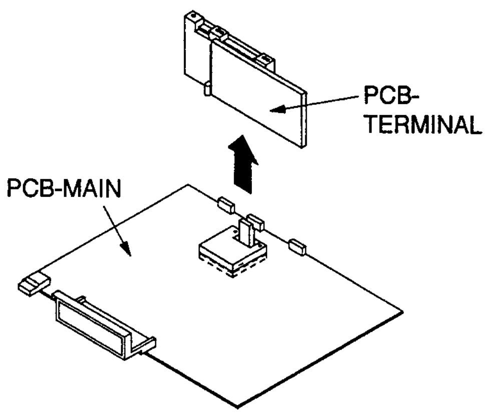


Fig. 15

6-2. Removal of PCB-TERMINAL

1. Remove the PCB-MAIN.
   (Refer to the preceding paragraph.)
2. Remove the PCB-TERMINAL shown in Fig. 16.

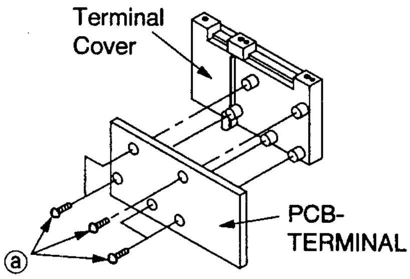


PCB-TERMINAL
PCB-MAIN

Fig. 16

6-3. Removal of Terminal Cover

1. Remove the PCB-MAIN.
   (Refer to the preceding paragraph.)
2. Remove the PCB-TERMINAL.
   (Refer to the preceding paragraph.)
3. Remove the five screws (ⓐ) shown in Fig. 17 and remove the Terminal Cover.

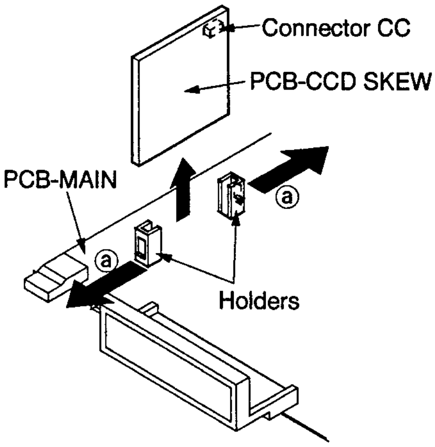


Terminal Cover
PCB-TERMINAL
ⓐ

Fig. 17

6-4. Removal of PCB-CCD SKEW

1. Remove the PCB-MAIN.
   (Refer to the preceding paragraph.)
2. Disconnect the connector CC.
3. Pull the catches of holders to the direction shown by arrow (ⓐ) to remove the PCB-CCD SKEW shown in Fig. 18.



Connector CC
PCB-CCD SKEW
PCB-MAIN
ⓐ
ⓐ
Holders

Fig. 18

DECK OPERATION CHECK

Operation of the deck position and tape running systems can be checked according to the following method.

1. Unscrew all screws fastening the DECK ASSY and Shield Case.
2. Place the DECK ASSY on the Base Chassis so that the center of the rear side aligns with the boss and that the rear side of the supply side aligns with the screw hole as shown in Fig. 1. Raise the front side of the DECK ASSY and support it.

Note: The MODE DETECT SENSOR, START SENSOR, END SENSOR, REEL SENSOR and RECORD PROTECTION SENSOR cannot operate in this state.

- Parts on the DECK (LOADING BELT and REEL BELT) can be replaced.

3. Short TP5T and TP5X.

Note: Connect them before plugging in the set.

4. Turn the Power on.
5. Press the RESET button on the rear panel.
   (The "LOCK" is displayed in fluorescent display.)
6. Insert the Video Cassette Tape.

Note: This check may damage the cassette tape.
Use a dummy cassette tape with a door or other tapes for test purpose only.

7. Press the TRACKING (+) and (-) buttons to check the deck position.
   TRACKING (+) button : Operation in the loading direction.
   TRACKING (-) button : Operation in the unloading direction.
8. Connect the Connector MC and the CAPSTAN MOTOR on the PCB-MAIN with the Extension cable (859C433O80). Press the POSITION/VERTICAL ADJUST (+) and (-) buttons to check the operation of the tape running system.

Note: Take care that the two connectors of the Extension cable are attached in the same direction, without twisting the cable.
(+) button : Forward rotation is implemented.
(-) button : Reverse rotation is implemented.

- **Example :** Play back, REW/FF
  1. Press the TRACKING (+) or (-) button to align the character PR or FR of the CAM GEAR (TU) with the positioning hole of the WORM PULLEY UNIT shown in Fig. 4.
     PR : Play back position
     FR : REW/FF position
  2. For fast forward operation check, press the POSITION/VERTICAL ADJUST (+) button to make the CAPSTAN MOTOR rotate in the forward direction. For rewind operation check, press the POSITION/VERTICAL ADJUST (-) button to make the CAPSTAN MOTOR rotate in the reverse direction.

9. Open TP5T and TP5X.
10. Press the RESET button on the rear panel.

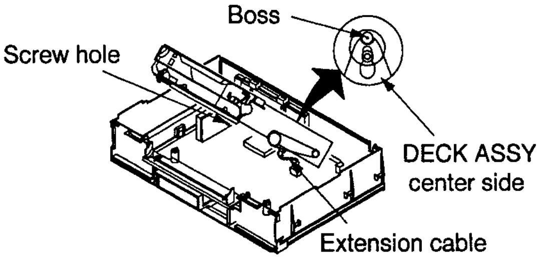


Fig. 1

PCB-MAIN (Component side)

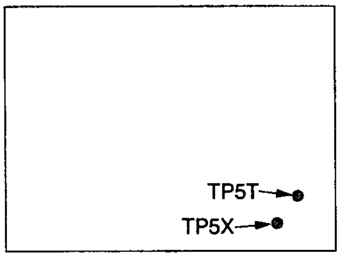


Fig. 2

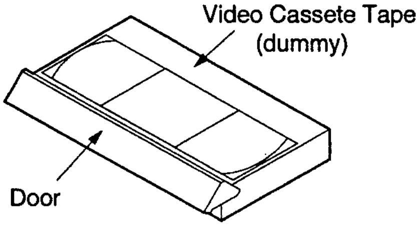


Fig. 3

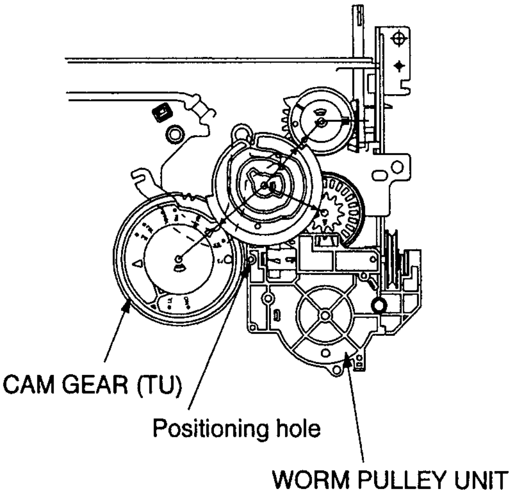
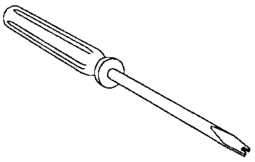
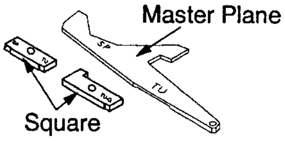
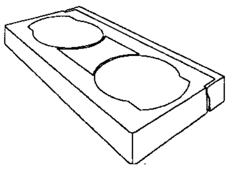
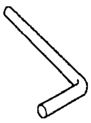
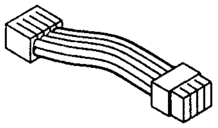
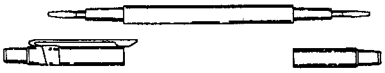
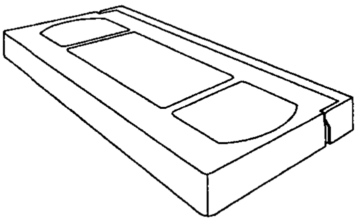


Fig. 4

MECHANICAL ADJUSTMENT TOOLS

	PURPOSE	METHOD
Adjustment Driver **(859C259080)** 	For adjustment of guide rollers.	Carefully insert and adjust guide rollers.
Height adjusting Jig **• Master Plane** **(859C342020)** **• Square** **(859C433060)**  	The master plane and the square are used for measuring height and perpendicularity of the reel disk and Take up guide arm.	The gauge is applied to the part being measured.
Back Tension Gauge **(859C345080)** 	The back tension gauge is used for measuring the tension of the tape on the supply side.	Load this gauge in the cassette housing and run in the play mode. Read the gauge indicator.
Cotton gloves	For changing, cleaning and handling of drum, heads and guides.	Use when handling all parts in the tape path.
Grease **MULTEMP SH-A** **(859D055080)**	Lubrication of various parts.	To be applied as specified.
L SHARPED BOX DRIVER **(859C433070)** 	The L SHARPED BOX DRIVER is used for tightening or removing screws which fasten the guide rollers.	Insert the screw and turn.
Extension Cable **(859C433080)** 	For check of DECK operation.	Connect the MC connector and the CAPSTAN MOTOR.
Oil **FLOIL** **(859D154020)**	Lubrication of various parts.	To be applied as specified.

ELECTRICAL ADJUSTMENT TOOLS

	PURPOSE	METHOD
Adjustment Driver (859C338000) **767-M** 	The adjustment driver is intended to adjust variable resistors, trimmers, transformers etc. in the circuitry.	Select a tip suitable for the particular head of the component concerned and adjust.
Alignment Tape **(PS2 : 859C339010)** **(PM6KH3 : 859C339030)** **(PM3KE6(CH1) 25 : 859C568050)** **(PMX : 859C568070)** 	Standard signals (VHS Standard) are recorded on the alignment tape and reproduced when required in the adjustment of Servo circuit and interchangeability alignment.	Install and run in the play mode, the same as for an ordinary tape.

ELECTRICAL ADJUSTMENTS

Perform only the alignments required. If proper equipment is not available, do not attempt an alignment.

□PRE-ADJUSTMENT SETTINGS

* If otherwise specified, make adjustments under the following conditions.

• A-TAPE	VHS TAPE (E-180) on the market.
• VIDEO	Colour position.
• PICTURE VR (VR701)	Centre click stop position.
• LOCK button	OFF position.
• Display mode	Non-characters display mode. (DISPLAY MODE 3 or 4)

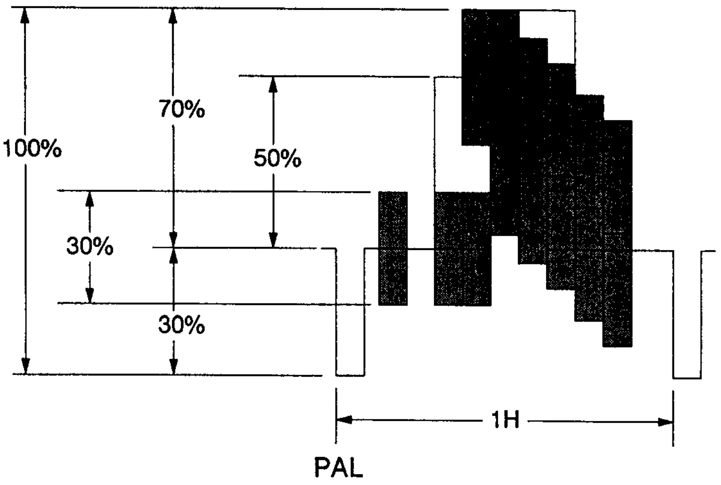
□MEASURING EQUIPMENT

- Oscilloscope (10:1 probe unless 1:1 specified.)
- Signal generator
- Audio tester
- Frequency counter
- Miscellaneous electrical tools
- Wired remote hand unit

□TEST SIGNAL

Colour bar signal

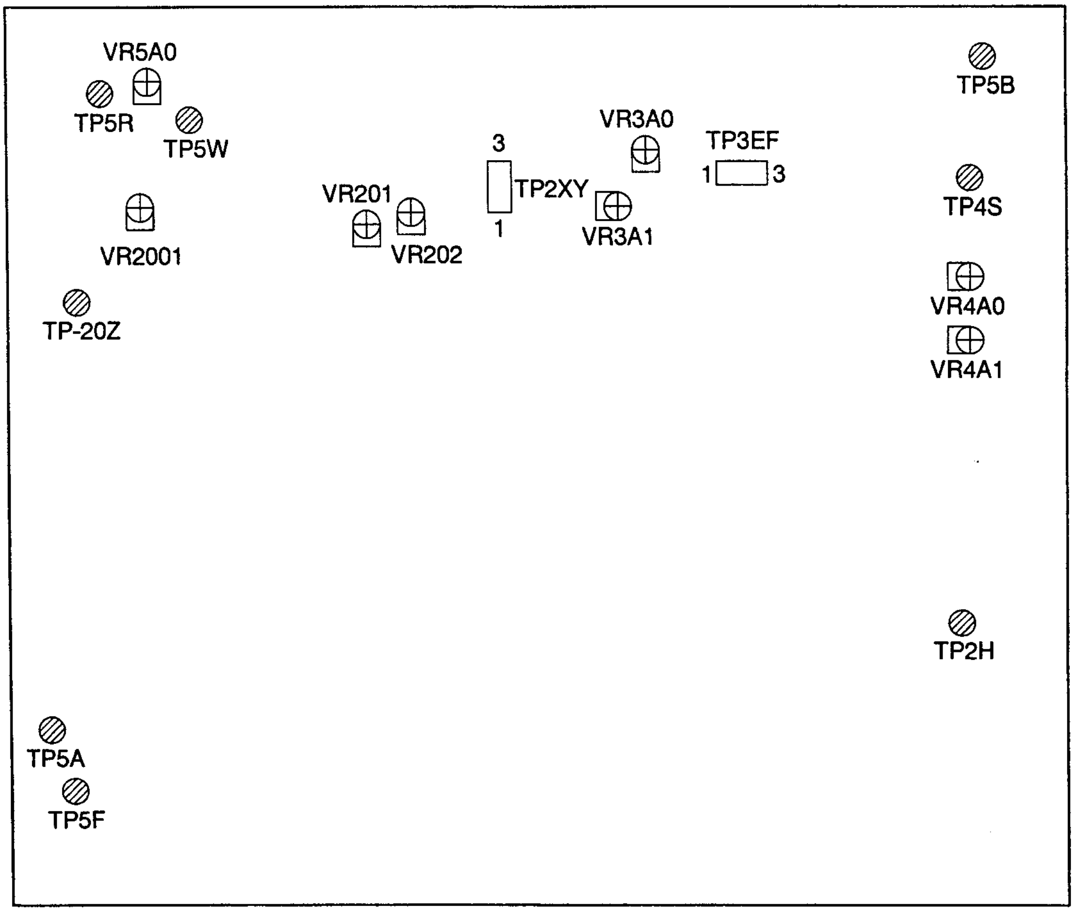
In this manual, unless otherwise specified in particular, use the colour bar signal specified below.



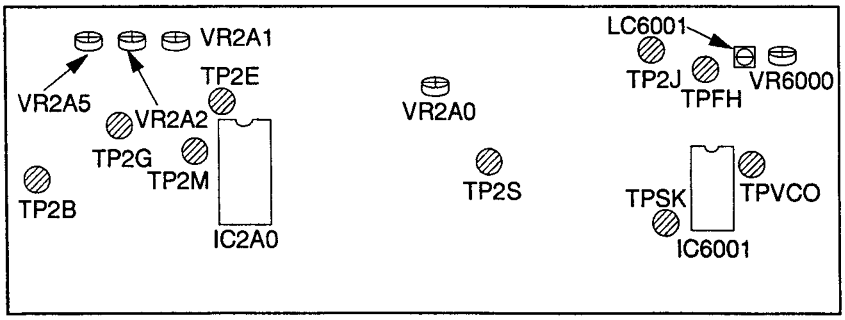
Split-Field colour bar (with 100% window)

LOCATIONS

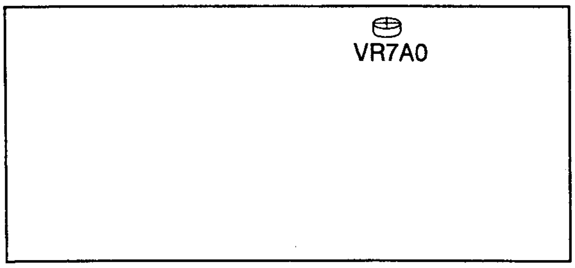
PCB-MAIN (Component side) REAR


VR5A0
TP5R
TP5W
VR2001
TP-20Z
VR201
VR202
3
TP2XY
1
VR3A0
VR3A1
TP3EF
1
3
TP5B
TP4S
VR4A0
VR4A1
TP2H
TP5A
TP5F

PCB-Y/C (Component side) TOP


VR2A1
VR2A5
VR2A2
TP2E
TP2G
TP2M
TP2B
IC2A0
VR2A0
TP2S
LC6001
TP2J
TPFH
VR6000
TPSK
TPVCO
IC6001

PCB-CCD SKEW (Component side) TOP

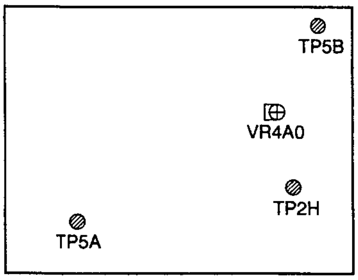


[Servo circuit] 1. Playback Switching Point (W4HEAD)	**Adjustment purpose**	Video switch over timing during playback.
	Symptom when incorrectly adjusted	Switching noise or jitter in the playback picture.

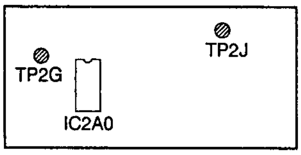
Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	– – –
Test point	TP2J	**Using tape**	Alignment Tape (PS2, stair step)
EXT trigger	TP2H	**VCR condition**	3H Playback
Measurement range	DIV 20mV TIM 50µs	**Using Jig**	– – –

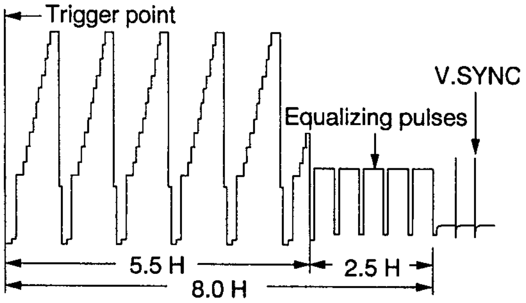
1. Set the VCR to 3H PLAY mode.
2. Play an Alignment Tape. (PS2, stair step)
3. Push the TRACKING (+) and (-)buttons at the same time.
4. Short TP5A to TP5B.
5. Observe the waveform at TP2J. (The probe must be grounded to TP2G.)
6. Set the oscilloscope's slope to (–).
7. Adjust VR4A0 so that the trigger point is located at 8.0 ± 1.0H before the vertical synchronising signal.
8. Open TP5A to TP5B.

PCB-MAIN (Component side)



PCB-Y/C (Component side)



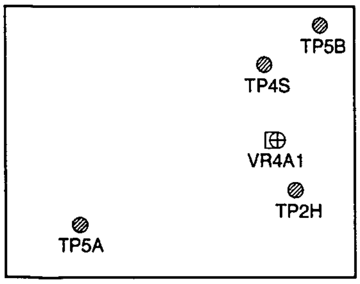


[Servo circuit] 2. Playback Switching Point (SP RECORDING HEAD)	**Adjustment purpose**	Video switch over timing during playback.
	Symptom when incorrectly adjusted	Switching noise or jitter in the playback picture.

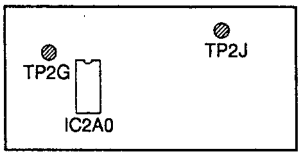
Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	– – –
Test point	TP2J	**Using tape**	Alignment Tape (PS2, stair step)
EXT trigger	TP2H	**VCR condition**	3H Playback
Measurement range	DIV 20mV TIM 50µs	**Using Jig**	– – –

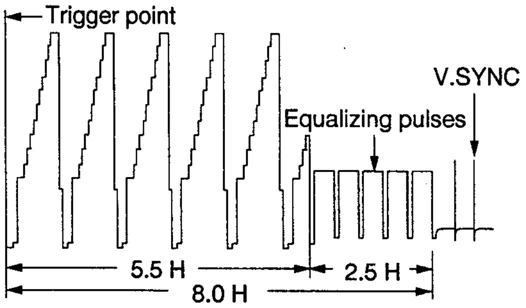
1. Set the VCR to 3H PLAY mode.
2. Play an Alignment Tape. (PS2, stair step)
3. Push the TRACKING (+) and (-)buttons at the same time.
4. Short TP5A to TP5B.
5. Short TP4S to TP5B.
6. Observe the waveform at TP2J. (The probe must be grounded to TP2G.)
7. Set the oscilloscope's slope to (–).
8. Adjust VR4A1 so that the trigger point is located at 8.0 ± 1.0H before the vertical synchronising signal.
9. Open TP5A to TP5B.
10. Open TP4S to TP5B.

PCB-MAIN (Component side)



PCB-Y/C (Component side)



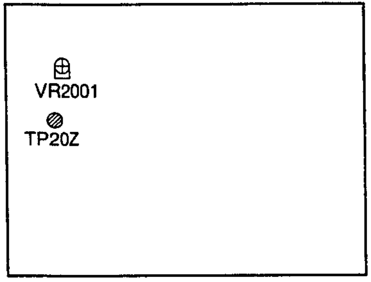


[Y/C signal circuit] 3. CG-AGC	**Adjustment purpose**	Setting output level of the CG circuit.
	Symptom when incorrectly adjusted	Too bright or too dark picture.

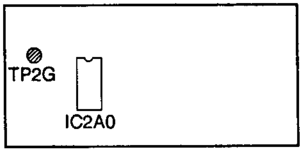
Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	Video signal (PAL Colour bar)
Test point	TP20Z	**Using tape**	---
EXT trigger	---	**VCR condition**	STOP
Measurement range	DIV 50mV TIM 10μs	**Using Jig**	---

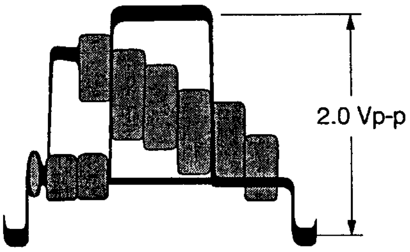
1. Supply a video signal (PAL Colour bar).
2. Observe the waveform at TP20Z.
   (The probe must be grounded to TP2G)
3. Adjust VR2001 so that the amplitude of waveform is 2.0Vp-p.

PCB-MAIN (Component side)



PCB-Y/C (Component side)

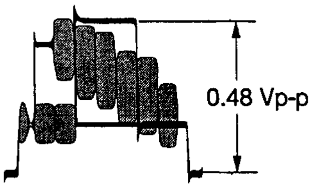




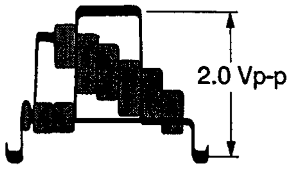
[Y/C signal circuit] 4. EE Out put Level	**Adjustment purpose**	To set output level of video signal at STOP mode.
	Symptom when incorrectly adjusted	Too bright or too dark image : incorrect colour.

Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	Video signal (PAL SPLIT FIELD)
Test point	TP2E TP2J	**Using tape**	---
EXT trigger	---	**VCR condition**	STOP
Measurement range	DIV 20mV TIM 10μs	**Using Jig**	---

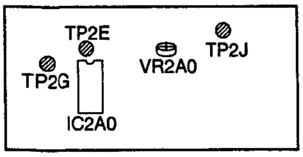
1. Supply a video signal (PAL SPLIT FIELD).
2. Be certain that nothing is connected to the VIDEO OUT terminal.
3. Observe the waveform at TP2E.
   (The probe must be grounded to TP2G.)
4. Adjust VR2A0 so that the amplitude of waveform is 0.48Vp-p.



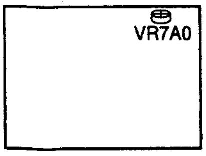
5. Observe the waveform at TP2J.
   (The probe must be grounded to TP2G.)
6. Adjust VR7A0 so that the amplitude of waveform is 2.0Vp-p.



PCB-Y/C (Component side)



PCB-CCD SLEW (Component side)

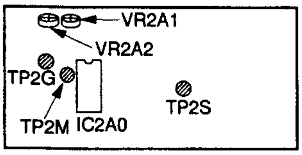


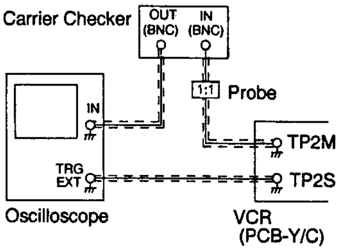
[Y/C signal circuit] 5. Carrier set, Deviation	**Adjustment purpose**	FM carrier frequency and deviation.
	Symptom when incorrectly adjusted	Too bright or too dark picture. Horizontal noise or less of sync.

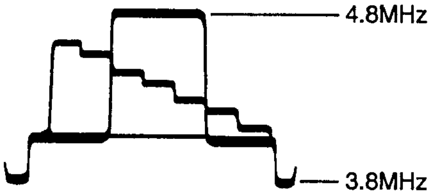
Measuring instrument and condition		**VCR set up condition**	
Oscilloscope (Probe 1:1)		**Input signal**	Video signal (PAL Colour bar)
Test point	TP2M	**Using tape**	A Tape
EXT trigger	TP2S	**VCR condition**	3H REC
Measurement range	DIV 0.2V TIM 10µs	**Using Jig**	Carrier Checker

1. Supply a video signal (PAL Colour bar).
2. Set the VCR to 3H REC mode.
3. Observe the waveform at TP2M using a carrier checker.
   (The probe must be grounded to TP2G.)
4. Adjust VR2A1 so that the sync tip is at 3.8MHz.
5. Adjust VR2A2 so that the peak white is at 4.8MHz.

PCB-Y/C (Component side)



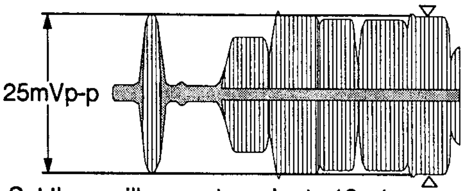




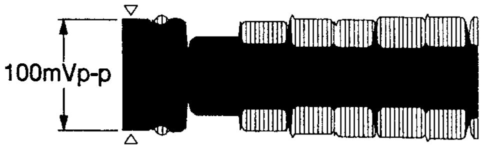
[Y/C signal circuit] 6. Y/C Recording Level	**Adjustment purpose**	Set the record level of the video and chroma signal.
	Symptom when incorrectly adjusted	Low luminance S/N, beats, colour bounding or flicker.

Measuring instrument and condition		**VCR set up condition**	
Oscilloscope (Probe 1:1)		**Input signal**	Video signal (PAL Colour bar)
Test point	TP2XY (pin ①, pin ②)	**Using tape**	A Tape
EXT trigger	---	**VCR condition**	6H REC
Measurement range	DIV 5mV TIM 5µs	**Using Jig**	---

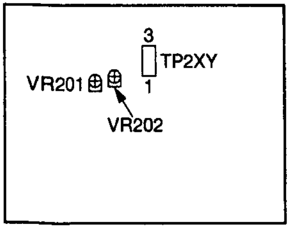
1. Remove the three screws and rise the Shield Plate upward to remove it as shown below.
2. Supply a video signal (PAL Colour bar).
3. Set the VCR to 6H REC mode.
4. Short TP2M to TP2B.
5. Be certain that nothing is connected to VIDEO OUT terminal.
6. Observe the waveform at TP2XY (pin ① (GND), pin ②).
7. Adjust VR201 so that the RED signal is 25mVp-p.

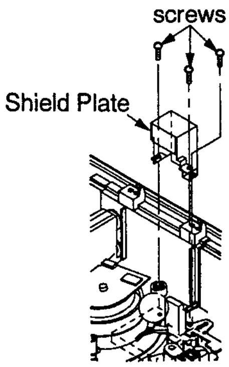


8. Set the oscilloscope's probe to 10 : 1.
9. Open TP2M to TP2B.
10. Adjust VR202 so that the amplitude of horizontal sync is 100mVp-p.

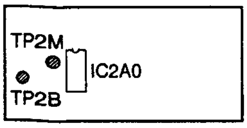


PCB-MAIN (Component side)





PCB-Y/C (Component side)

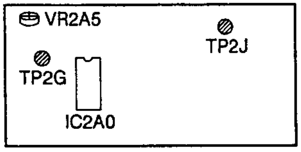


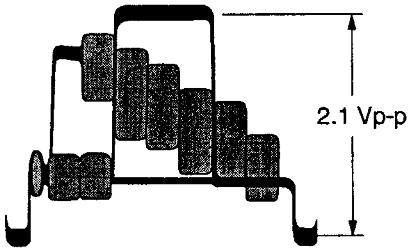
[Y/C signal circuit] 7. Playback Demodulation Sensitivity	**Adjustment purpose**	Setting each output level to the same when playing a tape recorded in VHS.
	Symptom when incorrectly adjusted	Both Y signal and colour signal will be played back incorrectly

Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	---
Test point	TP2J	**Using tape**	Alignment Tape (PS2, colour bar)
EXT trigger	---	**VCR condition**	3H Playback
Measurement range	DIV 50mV TIM 10µs	**Using Jig**	---

1. Set the VCR to 3H PLAY mode.
2. Be certain that nothing is connected to the VIDEO OUT terminal.
3. Play an alignment tape (PS2, colour bar).
4. Observe the waveform at TP2J.
   (The probe must be grounded to TP2G.)
5. Adjust VR2A5 so that the amplitude of waveform is 2.1Vp-p.

PCB-Y/C (Component side)



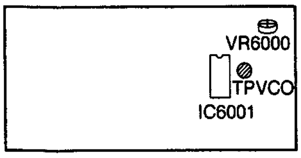


[Y/C signal circuit] 8. 2Fh VCO	**Adjustment purpose**	Picture distortion generated in forward speed search, reverse speed search and reverse playback in LP mode is detected.
	Symptom when incorrectly adjusted	Swing , noise or skew is noticeable on the screen in forward speed search, reverse speed search or reverse playback in LP mode.

Measuring instrument and condition		**VCR set up condition**	
DC Voltmeter		**Input signal**	---
Test point	TPVCO	**Using tape**	Alignment Tape (PS2, colour bar)
EXT trigger	---	**VCR condition**	3H Playback
Measurement range	---	**Using Jig**	---

1. Set the VCR to 3H PLAY mode.
3. Play an alignment tape (PS2, colour bar).
4. Observe voltage at TPVCO.
5. Adjust VR6000 so that the DC voltage is 2.4 ± 0.05V.

PCB-Y/C (Component side)

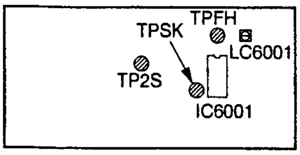


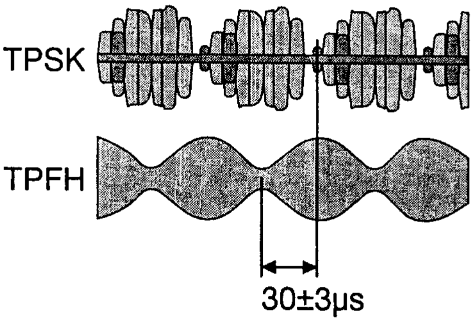
[Y/C signal circuit] 9. APC Error Phase	**Adjustment purpose**	Hue error generated in forward speed search,reverse speed search,and reverse playback.
	Symptom when incorrectly adjusted	No colour fault is caused in forward speed search, reverse search and reverse playback in LP mode.

Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	Video signal (PAL Colour bar)
Test point	CH1 : TPSK CH2 : TPFH	**Using tape**	A Tape
EXT trigger	TP2S	**VCR condition**	6H REC
Measurement range	DIV 50mV TIM 10µs	**Using Jig**	---

1. Supply a video signal (PAL Colour bar).
2. Set the VCR to 6H REC mode.
3. Still replay the tape recorded at the step 2 at 6H mode.
4. Connect CH1 of the oscilloscope to TPSK and CH2 to TPFH in the DUAL ALT mode.
5. Observe the wave form at TPSK and TPFH.
6. Adjust LC6001 so that time from ZERO cross point of the TPFH to Burst signal centre of TPSK is 30 ± 3 µsec.

PCB-Y/C (Component side)





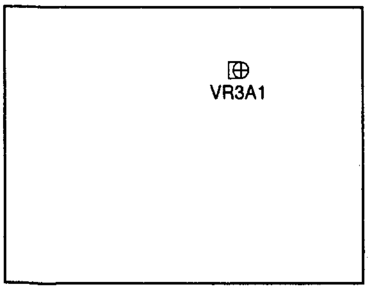
[Audio circuit] 10. Playback Audio Level	**Adjustment purpose**	Audio level during playback.
	Symptom when incorrectly adjusted	Too loud or too low audio level during playback.

Measuring instrument and condition		**VCR set up condition**	
Audio tester		**Input signal**	---
Test point	AUDIO OUT terminal	**Using tape**	Alignment Tape (PS2, colour bar)
EXT trigger	---	**VCR condition**	3H Playback
Measurement range	---	**Using Jig**	---

1. Set the VCR to 3H PLAY mode.
2. Play an alignment tape (PS2, colour bar).
3. Observe the audio level at AUDIO OUT terminal.
4. Adjust VR3A1 so that the audio output level is -6dBm.

Note: Check that the level fluctuation is less than ±1dB.if level fluctuation is over ±1dB then check the A/C HEAD slant adjustment.

PCB-MAIN (Component side)



[Audio circuit] 11. Audio Bias level	**Adjustment purpose**	Audio bias level setting for record.
	Symptom when incorrectly adjusted	Poor audio response in high frequency area or distortion.

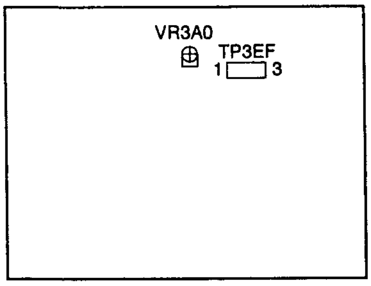
Measuring instrument and condition		**VCR set up condition**	
Audio tester		**Input signal**	---
Test point	TP3EF (pin ①, pin ③)	**Using tape**	A Tape
EXT trigger	---	**VCR condition**	3H REC
Measurement range	---	**Using Jig**	High pass filter

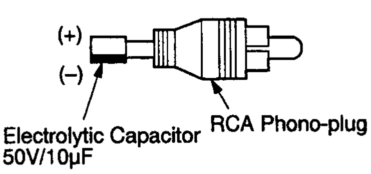
1. Insert the shorted RCA type Phono-plug into the AUDIO IN terminal.
2. Set the VCR to 3H REC mode.
3. Observe the audio level at TP3EF (pin ①, pin ③) with an Audio Tester using a high pass filter.
4. Confirm that the monitor TV etc. does not affect the indication of the Audio Tester and then adjust VR3A0 so that the level is 2.0mVr.m.s.

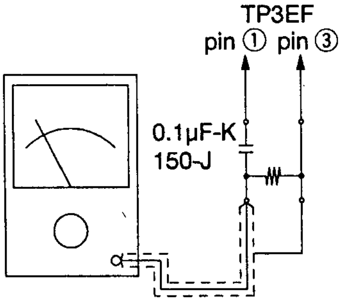
   Note 1: Be sure that the audio tester housing never touches the VCR chassis.

   Note 2: Never set the VCR to PLAY mode with the audio tester connected. (The audio amplifier will be over loaded.)

PCB-MAIN (Component side)





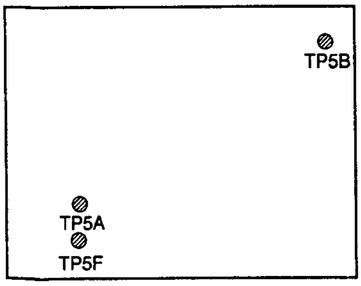


[Timer circuit] 12. Clock Frequency Correction	**Adjustment purpose**	To set the accuracy of the clock.
	Symptom when incorrectly adjusted	Poor clock accuracy.

Measuring instrument and condition		**VCR set up condition**	
Frequency Counter		**Input signal**	---
Test point	TP5F	**Using tape**	---
EXT trigger	---	**VCR condition**	Power off
Measurement range	---	**Using Jig**	---

1. Set the VCR to POWER off.
   (With the tape ejected from the VCR.)
2. Short TP5A to TP5B.
   (Confirm that the " REC " is displayed in fluorescent display.)
3. Observe the frequency at TP5F.
4. Be certain that the frequency is between 262.1000 ~ 262.1882kHz.
5. Use the Jog dial and Shuttle ring to enter the last three digits of the frequency counter reading (262.1ⓐⓑⓒkHz).
   Transfer to next subordinate figure's position, turn the shuttle-ring to clockwise direction and enter the digits in ⓐⓑⓒ sequence.
6. Push the REC button on the VCR.
7. Open TP5A to TP5B.
   (Confirm that the " REC " is not displayed in fluorescent display.)

PCB-MAIN (Component side)

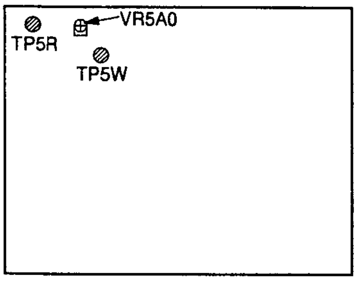


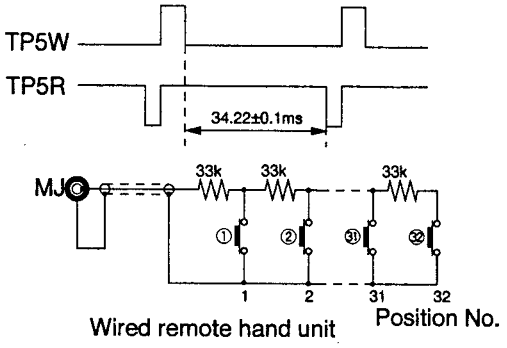
[Timer circuit] 13. Remote Control Circuit	**Adjustment purpose**	Setting timing of each position of wired remote hand unit.
	Symptom when incorrectly adjusted	Wrong operation.

Measuring instrument and condition		**VCR set up condition**	
Oscilloscope		**Input signal**	---
Test point	TP5W TP5R	**Using tape**	---
EXT trigger	---	**VCR condition**	STOP
Measurement range	---	**Using Jig**	Wired remote hand unit

1. Insert the wired remote hand unit into the REMOTE jack (When pushing the 32button,confirm that entire resistor value is 1056±0.2kΩ.)
2. Connect TP5W to input CH1 and TP5R to input CH2.
3. Press " position32 " on the wired remote hand unit to adjust VR5A0 so that TP5R falls 34.22±0.1ms after TP5W falls.
   (Adjust VR5A0 by turning it clockwise.)

PCB-MAIN (Component side)


VR5A0
TP5R
TP5W


TP5W
TP5R
34.22±0.1ms
MJ
33k
33k
33k
①
②
㉛
㉜
1
2
31
32
Wired remote hand unit
Position No.

MECHANICAL ADJUSTMENT AND REPLACEMENT

1. Cleaning the DECK

The following Parts require cleaning whenever serviced to maintain satisfactory performance.

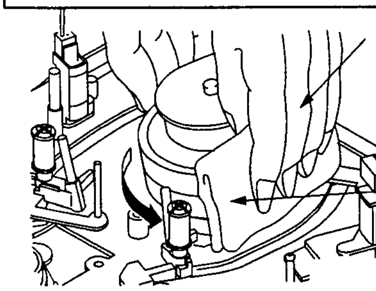
1-1. VIDEO HEAD

1. Clean the VIDEO HEADs by the following method. Dust and other foreign objects on the VIDEO HEADs disturb the normal play back picture. Dampen a Video Head Cleaning Cloth with alcohol. Hold the cloth against the DRUM and slowly turn the DRUM counterclockwise to clean.

Note : Do not directly touch the HEAD attached to the UPPER DRUM ASSY. The HEAD is very hard but brittle to impact, especially in the vertical direction.
Do not apply force in the vertical direction.

2. Allow residual alcohol to dry thoroughly before running a Tape. Otherwise, the liquid may stick to and damage the Tape.

UPPER DRUM ASSY cleaning


Lightly apply the cloth on the UPPER DRAM ASSY. Do not move the cloth.
Video Head Cleaning Cloth

1-2. Tape Transport (Refer to Fig. 1.)

Clean the following Parts of the Tape Transport.

1. TENSION PIN
2. GUIDE POLE (SP)
3. FE HEAD
4. SLANT POLE (SP)
5. UPPER/LOWER DRUM ASSY
6. SLANT POLE (TU)
7. A/C HEAD
8. GUIDE POLE (TU)
9. CAPSTAN SHAFT
10. GUIDE PIN (TU)
11. GUIDE ROLLER (SP)
12. GUIDE ROLLER (TU)
13. PINCH ROLLER

1. Clean the Tape Transport using Gauze dampened with alcohol, except the GUIDE ROLLER (SP), GUIDE ROLLER (TU) and PINCH ROLLER which Dry Gauze should be used.
2. Allow residual alcohol to dry thoroughly before running a Tape. Otherwise the liquid may stick to and damage the Tape.

1-3. REEL DISK Drive System

1. Clean the REEL DISK braking surfaces and the REEL BELT.
2. Clean the REEL DISK drive system using Gauze dampened with alcohol, except the REEL BELT. Use Dry Gauze to clean the the REEL BELT.
3. Allow residual alcohol to dry thoroughly before operation.

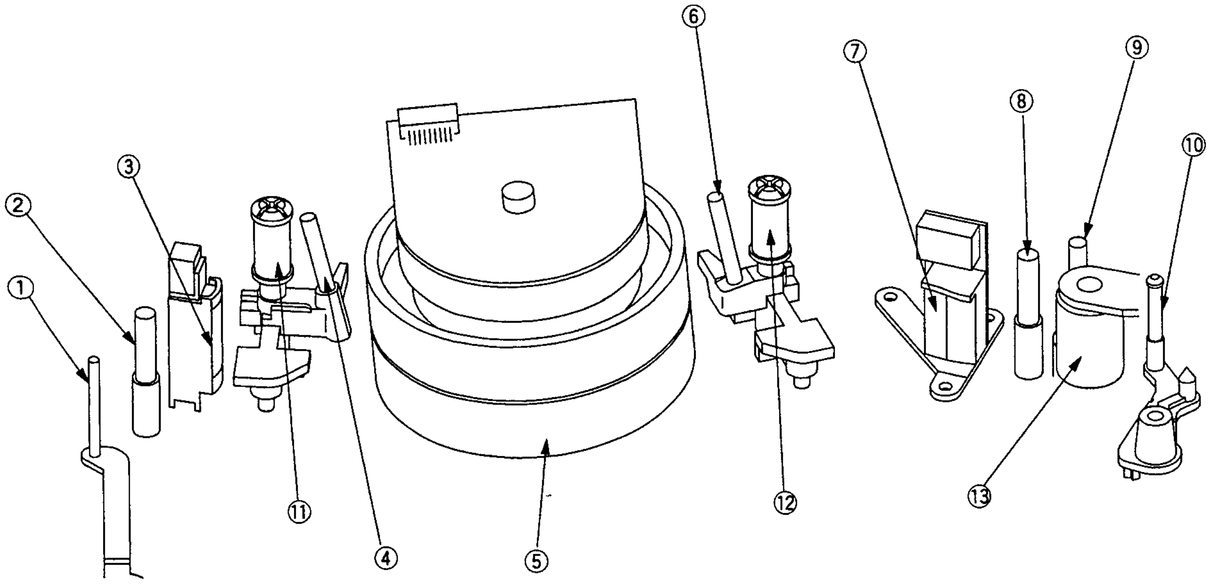


Fig. 1

2. Replacement of Major Parts

2-1. GUIDE ARM (SP), CLEANING ARM, CLEANING ROLLER UNIT

SET POSITION : Normal

(Removal)

1. Disconnect the Lead Connector from the FE HEAD, which is clamped on the GUIDE ARM (SP) shown in Fig. 2-1.
2. Unfasten the Catch (ⓐ) of the GUIDE ARM (SP) shown in Fig. 2-1 to remove the GUIDE ARM (SP).
3. Unfasten the Catch (ⓑ) of the CLEANING ARM shown in Fig. 2-1 to remove the CLEANING ARM.
4. Unfasten the Catch (ⓒ) of the CLEANING ARM shown in Fig. 2-1 to remove the CLEANING ROLLER UNIT from the CLEANING ARM.

(Installation)

1. Install the CLEANING ROLLER UNIT shown in Fig. 2-1 to the CLEANING ARM.
2. Install the CLEANING ARM shown in Fig. 2-1.
3. Install the GUIDE ARM (SP) shown in Fig. 2-1.
4. Connect the Lead Connector from the FE HEAD.

2-2. STAY PLATE

SET POSITION : Normal

(Removal)

1. Unfasten a LID HOLDER PLATE fastening screw (ⓐ) shown in Fig. 2-2. Remove the LID HOLDER PLATE.
2. Raise the STAY PLATE in the direction shown by arrow Ⓐ so that it stands completely in vertical, as shown in Fig. 2-2. Remove the STAY PLATE in the direction shown by arrow Ⓑ.

(Installation)

1. Install the STAY PLATE and the LID HOLDER PLATE shown in Fig. 2-2.

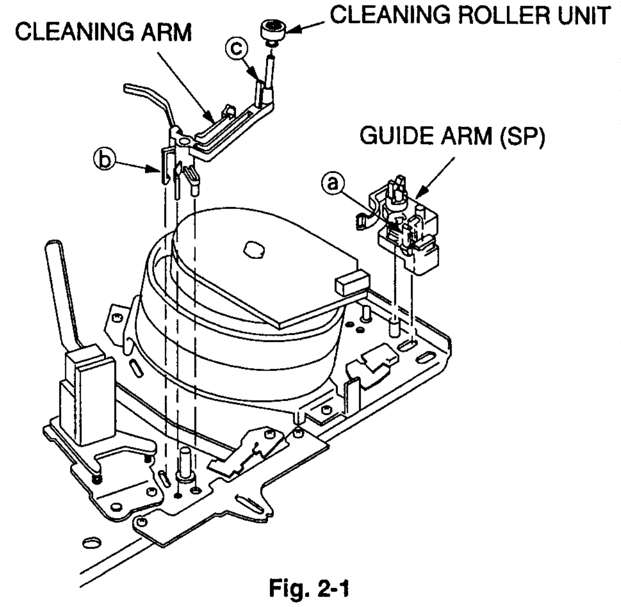


Fig. 2-1

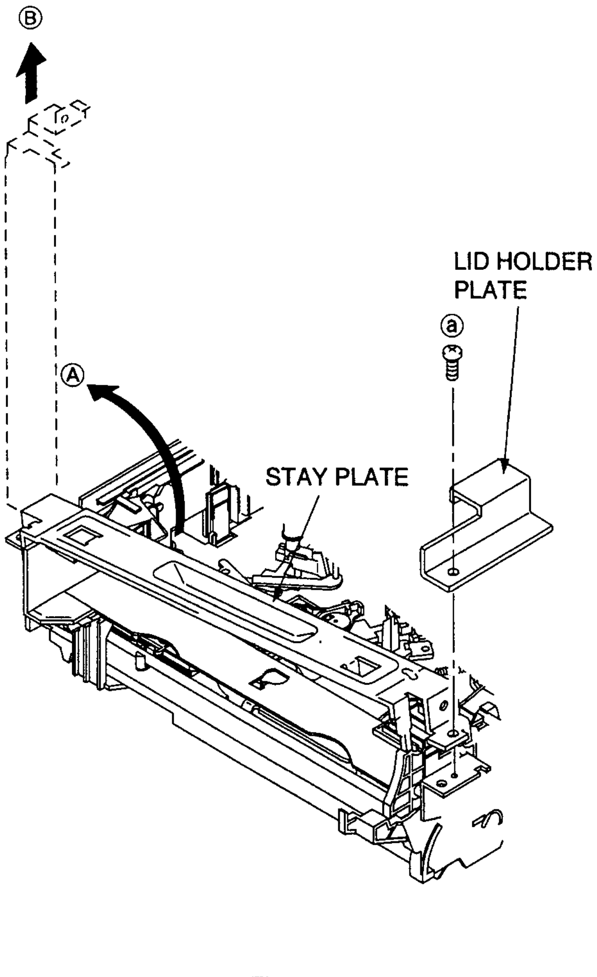


Fig. 2-2

2-3. BOTTOM UNIT

SET POSITION : Normal

(Removal)

1. Remove the STAY PLATE. (Refer to Para. 2-2.)
2. Remove the BOTTOM UNIT in the direction shown by arrow as shown in Fig. 2-3-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055O80] to the Groove of the MAIN PLATE ASSY specified in Fig. 2-3-5.
2. Apply GREASE (MULTEMP SH-A) [859D055O80] to the BOTTOM UNIT specified in Fig. 2-3-5.
3. Move the LID HOOK (TU) shown in Fig. 2-3-2 in the direction shown by arrow Ⓐ.
4. Move the LID HOOK (TU) and the LID OPENER (TU) in the direction shown by arrow Ⓑ in Fig. 2-3-3 so that the boss of the LID HOOK (TU) shown in Fig. 2-3-2 is inserted in the Matching Groove on the CASSETTE HOLDER (TU).
5. Move the LID OPENER (SP) of the BOTTOM UNIT in the direction shown by arrow Ⓐ and hold it with your hand as shown in Fig. 2-3-3.
6. Insert a Cassette Tape in the BOTTOM UNIT shown in Fig. 2-3-3 with the LID OPENER (TU) held down with the hands.

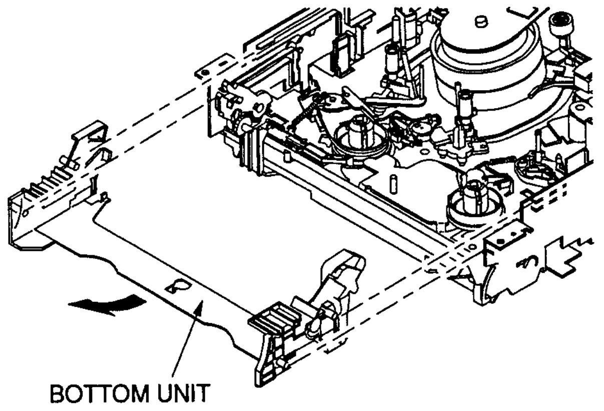

BOTTOM UNIT

Fig. 2-3-1

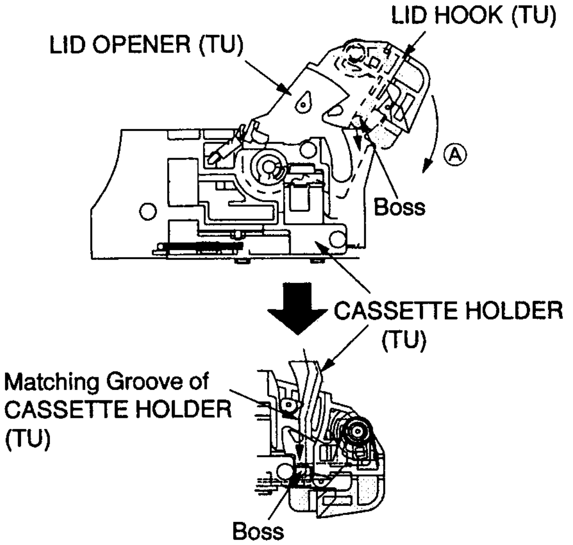

LID HOOK (TU)
LID OPENER (TU)
Ⓐ
Boss
CASSETTE HOLDER (TU)
Matching Groove of CASSETTE HOLDER (TU)
Boss

Fig. 2-3-2

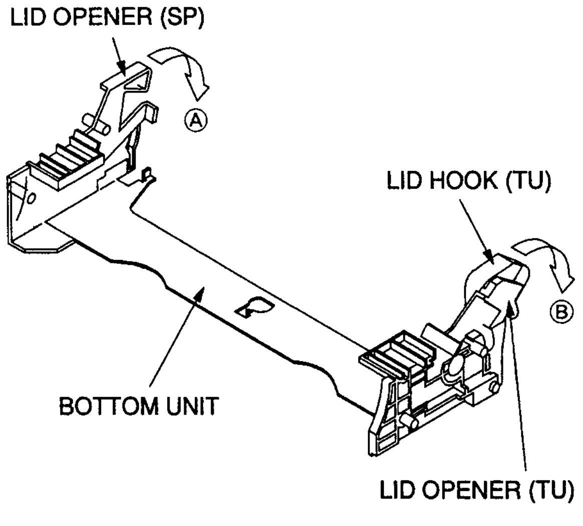

LID OPENER (SP)
Ⓐ
LID HOOK (TU)
Ⓑ
BOTTOM UNIT
LID OPENER (TU)

Fig. 2-3-3

7. Make sure that the Catches of the LID HOOK (TU) and the LID OPENER (SP) shown in Fig. 2-3-4 are fastened on the Cassette Tape.
8. Install the BOTTOM UNIT so that its boss matches with the groove of the MAIN PLATE ASSY as shown in Fig. 2-3-5.
9. Remove the Cassette Tape.
10. Install the STAY PLATE. (Refer to Para. 2-2.)

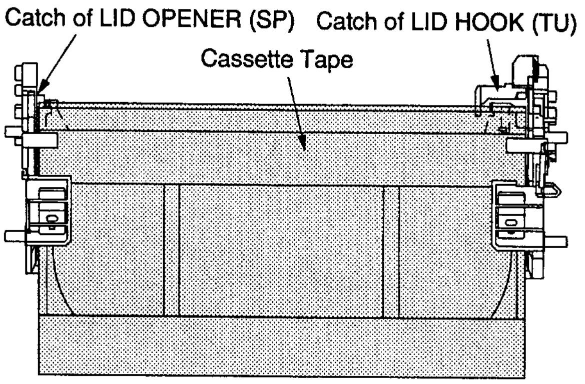

Catch of LID OPENER (SP)
Catch of LID HOOK (TU)
Cassette Tape

Fig. 2-3-4

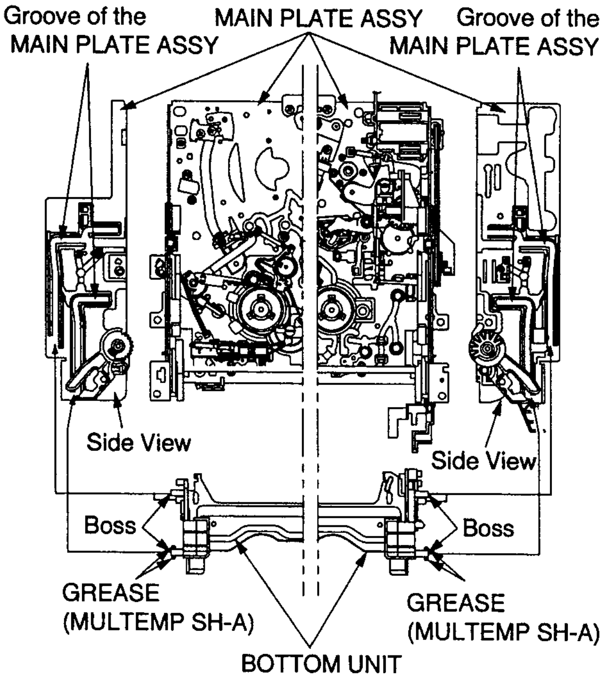

Groove of the MAIN PLATE ASSY
MAIN PLATE ASSY
Groove of the MAIN PLATE ASSY
Side View
Side View
Boss
Boss
GREASE (MULTEMP SH-A)
GREASE (MULTEMP SH-A)
BOTTOM UNIT

Fig. 2-3-5

2-4. A/C HEAD UNIT

SET POSITION : Normal

(Removal)

1. Disconnect the Card Lead Wire of the A/C HEAD UNIT shown in Fig. 2-4-1.
2. Unscrew the two A/C HEAD UNIT fastening screws (ⓐ) to remove the A/C HEAD UNIT.

(Installation)

1. Install the A/C HEAD UNIT shown in Fig. 2-4-1.

Note : Do not touch the part shown in Fig.2-4-2.
If it is stained, clean it with alcohol.

2. Connect the Card Lead Wire of the A/C HEAD UNIT shown in Fig. 2-4-1.
3. Perform "Adjustment of A/C HEAD" in Para. 3-3 and "Adjustment of Phase" in Para. 3-4 of "Interchangeability Adjustment of the Mechanism".

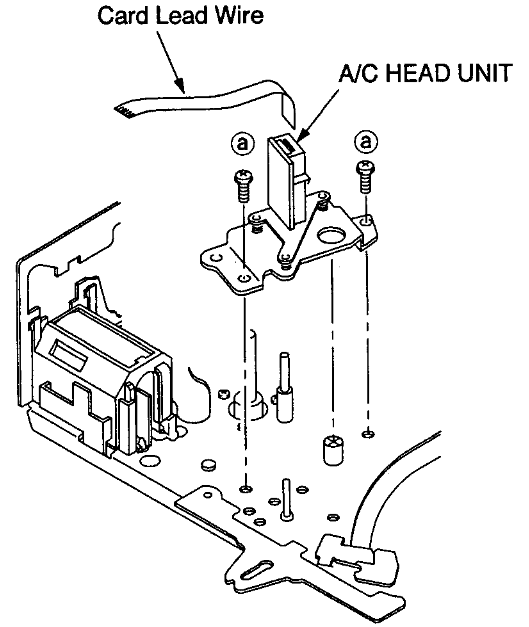


Fig. 2-4-1

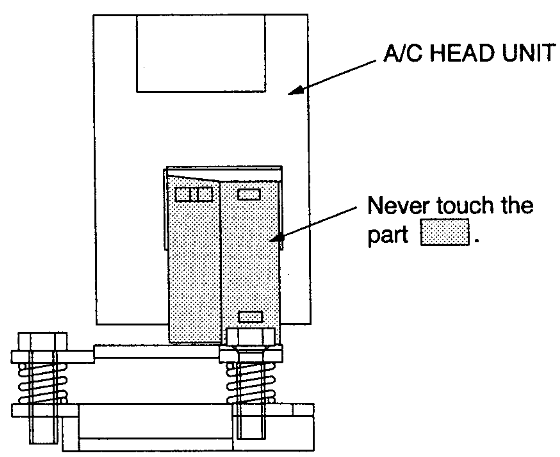


Fig. 2-4-2

2-5. FE HEAD

SET POSITION : Normal

(Removal)

1. Disconnect the Lead Connector of the FE HEAD shown in Fig. 2-5-1.
2. Unscrew the FE HEAD fastening screw (ⓐ) to remove the FE HEAD.

(Installation)

1. Install the FE HEAD shown in Fig. 2-5-1.

Note : Do not touch the part shown in Fig. 2-5-2.
If it is stained, clean it with alcohol.

2. Connect the Lead Connector of the FE HEAD shown in Fig. 2-5-1.

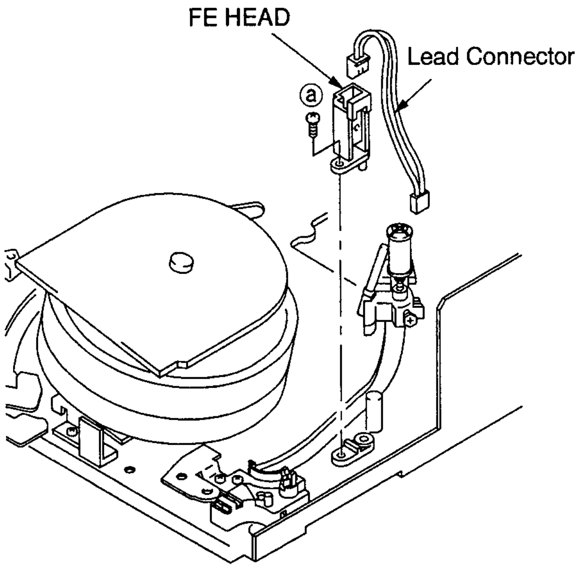


Fig. 2-5-1

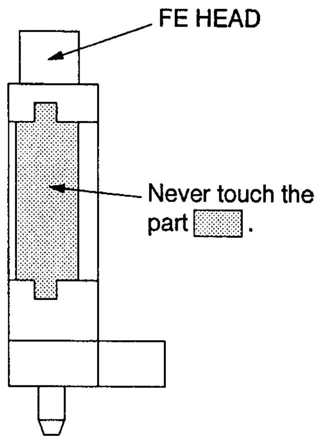

FE HEAD
Never touch the part ▨ .

Fig. 2-5-2

2-6. SHUT LEVER UNIT

SET POSITION : Normal

To access the SHUT LEVER UNIT, remove the :

- STAY PLATE (Para. 2-2)
- BOTTOM UNIT (Para. 2-3)

(Removal)

1. To remove the SHUT LEVER UNIT, unfasten the two Catches (ⓐ) of the SHUT LEVER UNIT shown in Fig. 2-6-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-6-1 on the MAIN PLATE ASSY.
2. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-6-1 on the new SHUT LEVER UNIT.
3. Install the SHUT LEVER UNIT shown in Fig. 2-6-1.
4. Insert the spring of the SHUT LEVER UNIT under Groove of the MAIN PLATE ASSY shown in Fig. 2-6-2.
5. Make sure that the SHUT LEVER UNIT returns in the direction shown by arrow Ⓑ when it is moved in the direction shown by arrow Ⓐ.

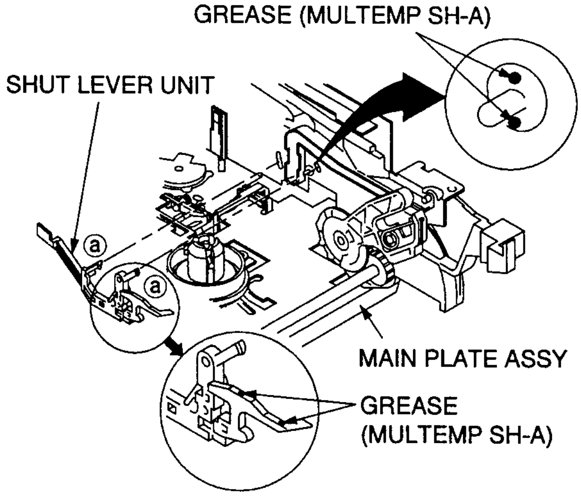

GREASE (MULTEMP SH-A)
SHUT LEVER UNIT
ⓐ
ⓐ
MAIN PLATE ASSY
GREASE
(MULTEMP SH-A)

Fig. 2-6-1

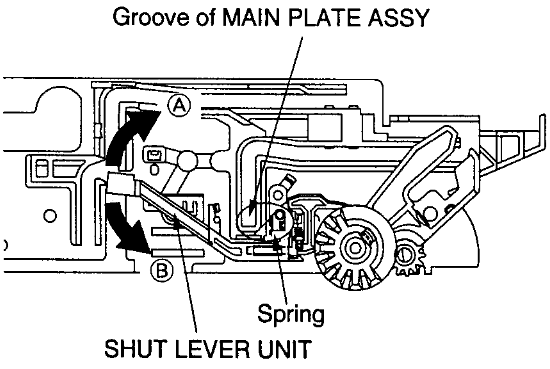

Groove of MAIN PLATE ASSY
Ⓐ
Ⓑ
Spring
SHUT LEVER UNIT

Fig. 2-6-2

2-7. LAMP GUIDE, MODE POSITION GUIDE

SET POSITION : Normal

(Removal)

1. Unscrew the LAMP GUIDE fastening screw (ⓐ) shown in Fig. 2-7-1.
2. Unfasten the Catch (ⓑ) of the MAIN PLATE ASSY shown in Fig. 2-7-1 to remove the LAMP GUIDE.
3. Unfasten the Catch (ⓒ) of the MODE POSITION GUIDE shown in Fig. 2-7-1 to remove the MODE POSITION GUIDE.

(Installation)

1. Clean the Part A of the MODE POSITION GUIDE shown in Fig. 2-7-2 with the Video Head Cleaning Cloth.

Note : Never use alcohol or equivalent solvent.

2. Install the MODE POSITION GUIDE shown in Fig. 2-7-1.
3. Clean the Part B of the LAMP GUIDE shown in Fig. 2-7-2 with the Video Head Cleaning Cloth.

Note : Never use alcohol or equivalent solvent.

4. Install the LAMP GUIDE shown in Fig. 2-7-1.
5. Install the screw (ⓐ) shown in Fig. 2-7-1.
6. After installing the LAMP GUIDE and MODE POSITION GUIDE, clean the surface of them with the Video Head Cleaning Cloth.

Note : Never use alcohol or equivalent solvent.

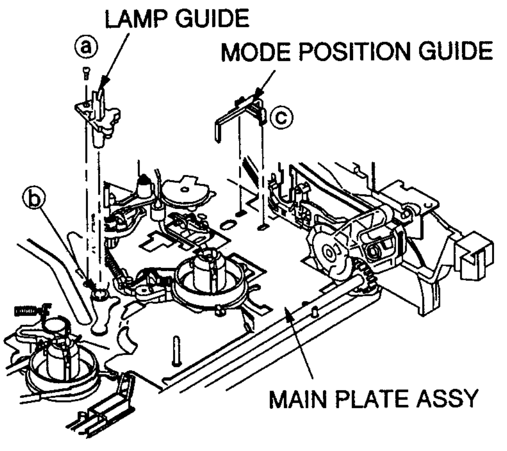


Fig. 2-7-1

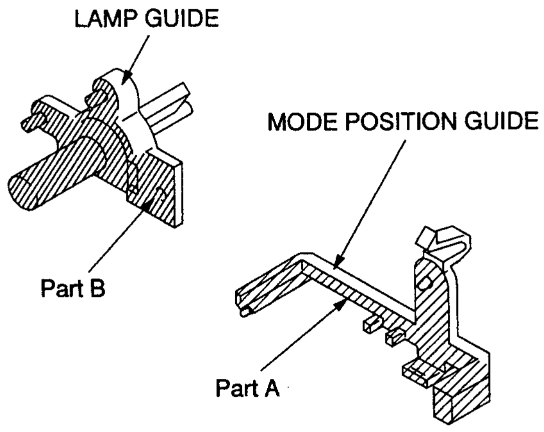


Fig. 2-7-2

2-8. TENSION SPRING, TENSION ARM, TENSION BELT UNIT

SET POSITION : Normal

(Removal)

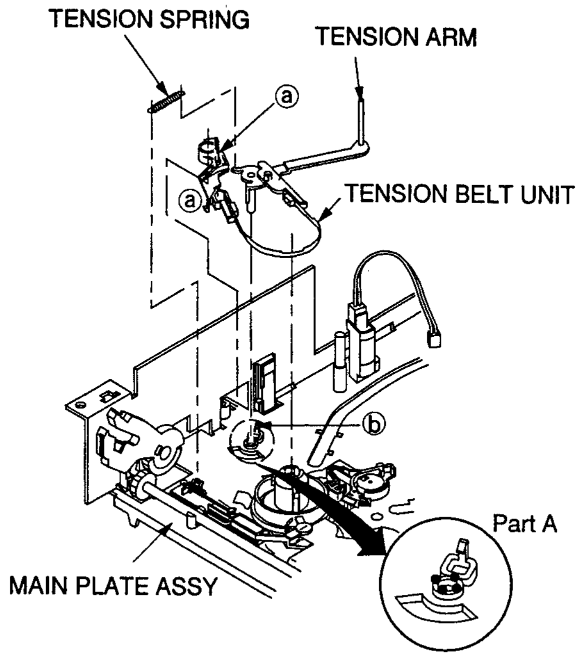
1. Remove the TENSION SPRING shown in Fig. 2-8-1.
2. Use a minus driver to move Part A of the MAIN PLATE ASSY, shown in Fig. 2-8-3, in the direction shown by arrow Ⓐ.
3. Unfasten the two Catches (ⓐ) of the TENSION BELT UNIT shown in Fig. 2-8-1. Unfasten the Catch (ⓑ) of the MAIN PLATE ASSY. Remove the TENSION BELT UNIT with the TENSION ARM attached.
4. Unfasten the two Catches (ⓒ) of the TENSION BELT UNIT shown in Fig. 2-8-2 to remove the TENSION ARM .

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-8-1 on the MAIN PLATE ASSY.
2. Attach the TENSION ARM on the TENSION BELT UNIT, refer to Fig. 2-8-2.
3. Fasten the TENSION BELT UNIT around the part of the REEL DISK (on SP side), refer to Fig. 2-8-3.

Note : Do not get GREASE or OIL on the TENSION BELT UNIT during installation.

4. Move the Part A of the spring of the TENSION LEVER UNIT, shown in Fig. 2-8-4, in the direction shown by arrow, and install the TENSION ARM in the position shown in Fig. 2-8-4.
5. Move the Part A of the MAIN PLATE ASSY in the opposite direction of arrow Ⓐ so it enters the concave portion of the TENSION BELT UNIT, as shown in Fig. 2-8-3, and points to the centre of the REEL DISK (On SP side).
6. Install the TENSION SPRING shown in Fig. 2-8-1.
7. Perform "Adjustment of BACK TENSION and TENSION PIN Position" in Para. 3-1 of "Interchangeability Adjustment of the Mechanism".



Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-8-1

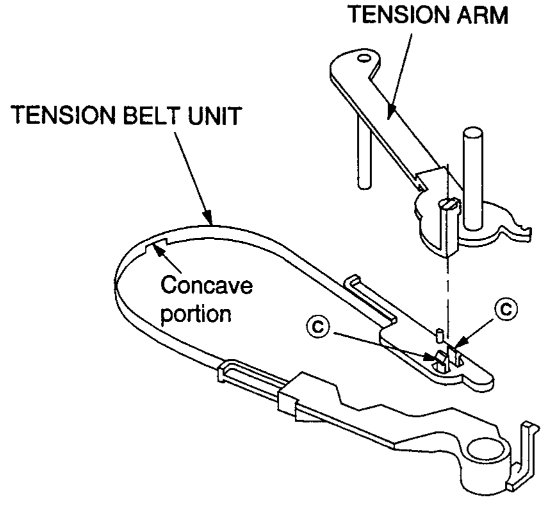
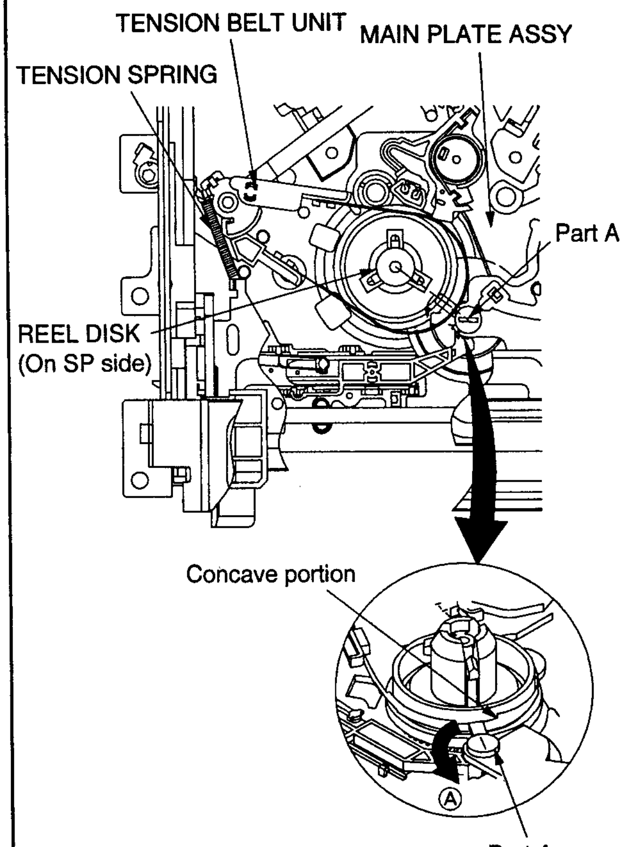
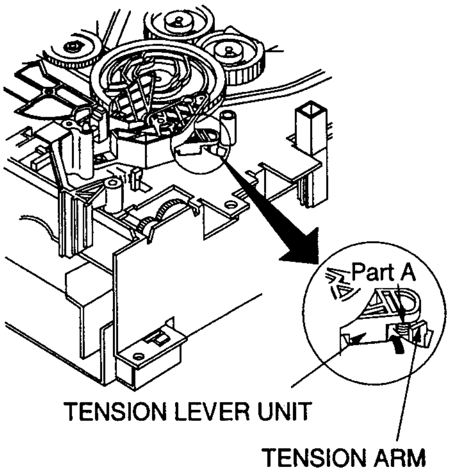


Fig. 2-8-2



TENSION BELT UNIT
MAIN PLATE ASSY
TENSION SPRING
Part A
REEL DISK
(On SP side)
Concave portion
Ⓐ
Part A

Fig. 2-8-3



Part A
TENSION LEVER UNIT
TENSION ARM

Fig. 2-8-4

2-9. BRAKE SPRING (for MAIN BRAKE (SP)), MAIN BRAKE (SP), BRAKE SPRING (for MAIN BRAKE (TU)), MAIN BRAKE (TU)

SET POSITION : Normal

(Removal)

1. Remove the BRAKE SPRING (for MAIN BRAKE (SP)) shown in Fig. 2-9.
2. Use tweezer to unfasten Catch (ⓐ) of the MAIN BRAKE and remove the MAIN BRAKE (SP), refer to Fig 2-9.
3. Remove the BRAKE SPRING (for MAIN BRAKE (TU)) shown in Fig. 2-9.
4. Unfasten the Catch (ⓑ) of the MAIN BRAKE (TU) shown, in Fig. 2-9, to remove the MAIN BRAKE (TU).

(Installation)

1. Install the MAIN BRAKE (TU) shown in Fig. 2-9.
2. Install the BRAKE SPRING (for MAIN BRAKE (TU)) shown in Fig. 2-9.
3. Install the MAIN BRAKE (SP) shown in Fig. 2-9.
4. Install the BRAKE SPRING (for MAIN BRAKE (SP)) shown in Fig. 2-9.

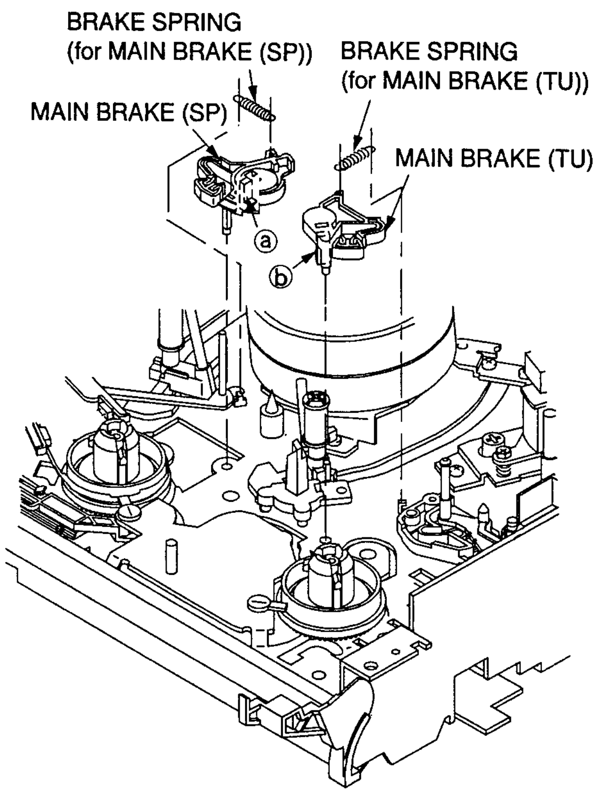

BRAKE SPRING
(for MAIN BRAKE (SP))
BRAKE SPRING
(for MAIN BRAKE (TU))
MAIN BRAKE (SP)
MAIN BRAKE (TU)
ⓐ
ⓑ

Fig. 2-9

2-10. REEL DISK (On SP side), REEL DISK (On TU side)

SET POSITION : Normal

To access the REEL DISK, remove the following parts :

- TENSION SPRING (Para. 2-8)
- TENSION ARM (Para. 2-8)
- TENSION BELT UNIT (Para. 2-8)

(Removal)

1. Move the MAIN BRAKE (SP) in the direction shown by arrow Ⓐ hold it in that position. Remove the REEL DISK (On SP side) as shown in Fig. 2-10-1.
2. Use a minus driver to move Part B in the direction shown by arrow Ⓑ, as shown in Fig. 2-10-1.
3. Move the MAIN BRAKE (TU) in the direction shown by arrow Ⓒ hold it in that position. Remove the REEL DISK (On TU side) as shown in Fig. 2-10-1.

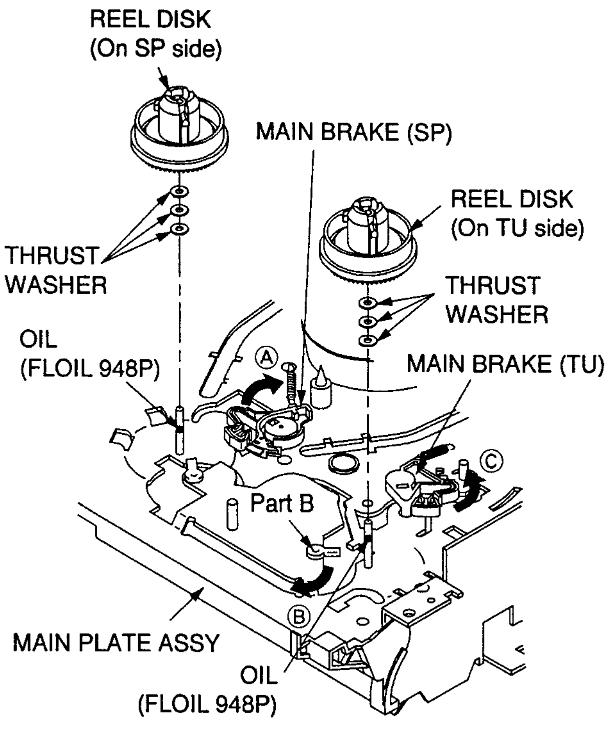

REEL DISK
(On SP side)
MAIN BRAKE (SP)
REEL DISK
(On TU side)
THRUST
WASHER
THRUST
WASHER
OIL
(FLOIL 948P)
Ⓐ
MAIN BRAKE (TU)
Ⓒ
Part B
Ⓑ
MAIN PLATE ASSY
OIL
(FLOIL 948P)

Fig. 2-10-1

(Installation)

1. Apply OIL (FLOIL 948P) [859D154020] to the shaft, shown in Fig. 2-10-1, for the REEL DISK (On SP side) on the MAIN PLATE ASSY.
2. Install the REEL DISK (On SP side) shown in Fig. 2-10-1.
3. Place the height adjustment jig [MASTER PLANE] (859C342020) shown in Fig. 2-10-2 in the reference position.
   (Position the MASTER PLANE so that the points A, B and C of the MAIN PLATE ASSY support it.)
4. Place the height adjustment jig [SQUARE] (859C433060) shown in Fig. 2-10-3 on the MASTER PLANE. Move it to the position shown in Fig. 2-10-3 and make sure that A can pass, but B cannot pass, under the REEL DISK (On SP side).
5. If the height of the REEL DISK (On SP side) is not correct, adjust the height by removing, or adding, a THRUST WASHER to the shaft, under the REEL DISK (On SP side).
   - If it is high, remove THRUST WASHER.
   - If it is low, add THRUST WASHER.
6. Install the TENSION BELT UNIT, TENSION ARM and TENSION SPRING.
   (Refer to Para. 2-8 for the installation method.)
7. Make sure that the REEL DISK (On SP side), shown in Fig. 2-10-1 cannot come off.
8. Apply OIL (FLOIL 948P) [859D154020] to the shaft, shown in Fig. 2-10-1, for the REEL DISK (On TU side) on the MAIN PLATE ASSY.
9. Install the REEL DISK (On TU side) shown in Fig. 2-10-1.
10. Install the height adjustment jig [MASTER PLANE] (859C342020) shown in Fig. 2-10-3 in the reference position.
    (Position the MASTER PLANE so that the points A, B and C of the MAIN PLATE ASSY support it.)
11. Place the height adjustment jig [SQUARE] (859C433060) shown in Fig. 2-10-2 on the MASTER PLANE. Move it to the position shown in Fig. 2-10-4 and make sure that A can pass, but B cannot pass, under the REEL DISK (On TU side).
12. If the height of the REEL DISK (On TU side) is not correct, adjust the height by removing, or adding, a THRUST WASHER to the shaft under the REEL DISK (On TU side).
    - If it is high, remove THRUST WASHER.
    - If it is low, add THRUST WASHER.
13. Move Part B of the MAIN PLATE ASSY in the opposite direction of arrow Ⓑ, as shown in Fig. 2-10-1 so that it points to the centre of the REEL DISK (On TU side).
14. Make sure that the REEL DISK (On TU side) shown in Fig. 2-10-1 cannot come off.

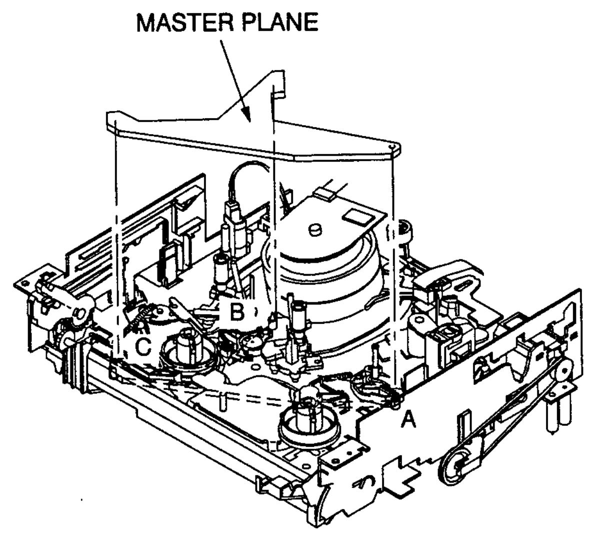


Fig. 2-10-2

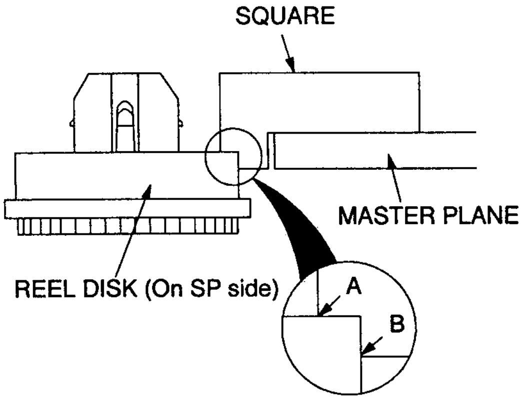


Fig. 2-10-3

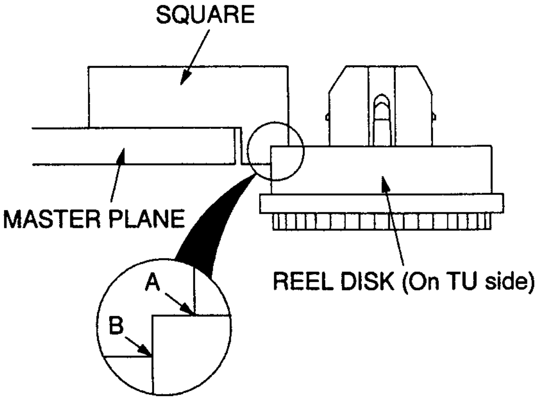


Fig. 2-10-4

2-11. LOADING BELT, LOADING MOTOR ASSY

SET POSITION : Normal

(Removal)

1. Remove the LOADING BELT shown in Fig. 2-11-1.
2. To remove the two LOADING MOTOR ASSY unfasten Catches (ⓐ) of the LOADING MOTOR ASSY, shown in Fig. 2-11-2, and unfasten the two Catches (ⓑ).

(Installation)

1. Install the LOADING MOTOR ASSY shown in Fig. 2-11-2.
2. Fasten the LOADING BELT shown in Fig. 2-11-1.

Note : Do not get GREASE or OIL on the LOADING BELT during installation.

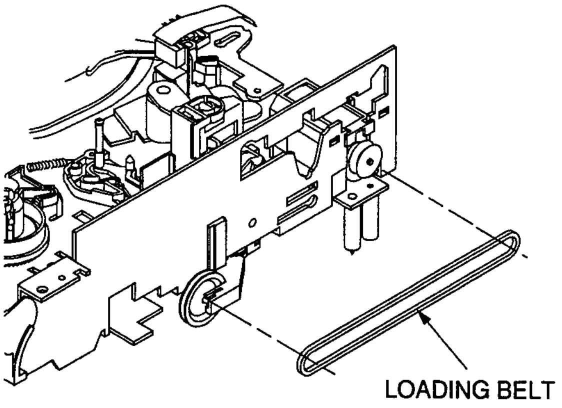


Fig. 2-11-1

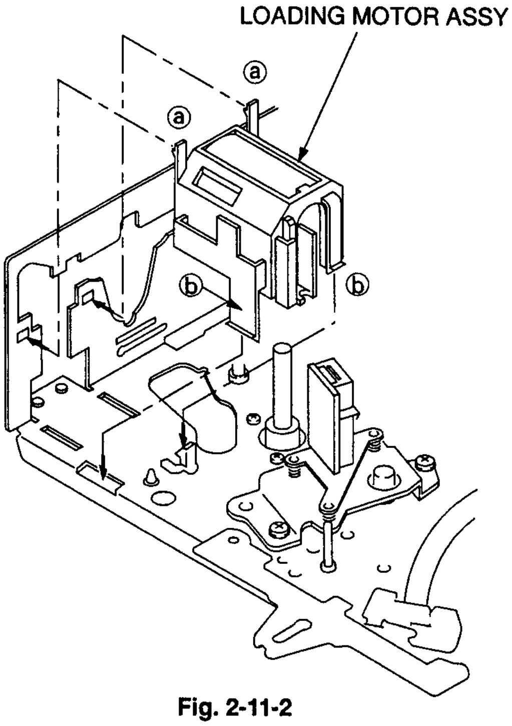


Fig. 2-11-2

2-12. PINCH ARM CAP 2, PINCH ARM UNIT, PINCH GEAR ARM 2, PINCH CAM HOLDER, PINCH CAM SPRING, PINCH CAM LEVER, PINCH RACK SLIDER, PINCH CAM GEAR

SET POSITION : Normal

(Removal)

1. Use tweezers to unfasten the two Catches (ⓐ) of the PINCH ARM CAP 2 shown in Fig. 2-12-1, and remove the PINCH ARM CAP 2.
2. Move the PINCH ARM UNIT in the direction shown by arrow Ⓐ to remove it as shown in Fig. 2-12-1.
3. Remove the PINCH GEAR ARM 2 shown in Fig. 2-12-1.
4. Remove the PINCH CAM SPRING shown in Fig. 2-12-1.
5. Remove the PINCH CAM LEVER shown in Fig. 2-12-1.
6. Unfasten the Catch (ⓑ) of the PINCH RACK SLIDER shown in Fig. 2-12-1. Move the PINCH RACK SLIDER in the direction shown by arrow Ⓑ to remove it.
7. Remove the screw (ⓒ) of the PINCH CAM HOLDER shown in Fig. 2-12-1, to remove the PINCH CAM HOLDER.
8. Remove the PINCH CAM GEAR shown in Fig. 2-12-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-12-2 on the new PINCH CAM GEAR.

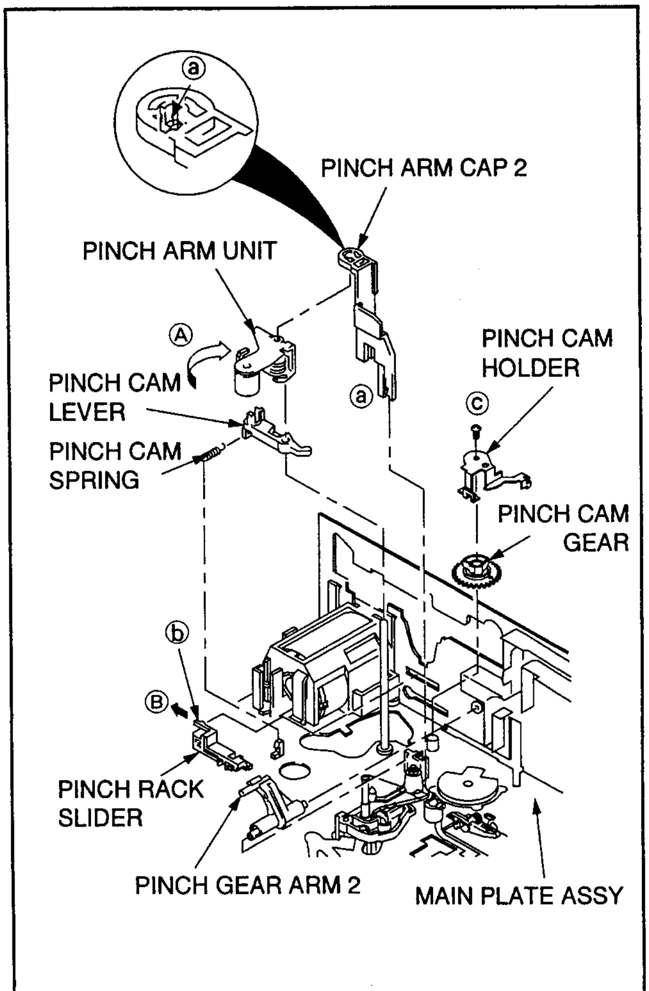

ⓐ
PINCH ARM CAP 2
PINCH ARM UNIT
Ⓐ
PINCH CAM HOLDER
PINCH CAM LEVER
ⓐ
ⓒ
PINCH CAM SPRING
PINCH CAM GEAR
ⓑ
Ⓑ
PINCH RACK SLIDER
PINCH GEAR ARM 2
MAIN PLATE ASSY

Fig. 2-12-1

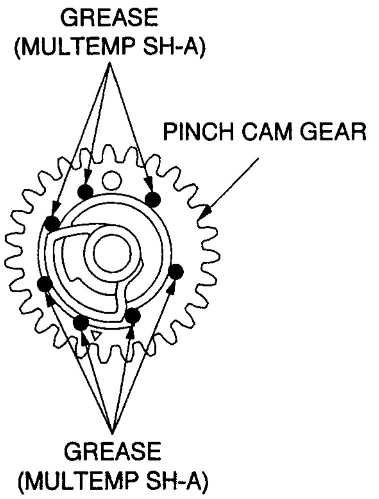

GREASE (MULTEMP SH-A)
PINCH CAM GEAR
GREASE (MULTEMP SH-A)

Fig. 2-12-2

2. Set the PINCH CAM GEAR so that the Δ mark on it matches with the Δ mark on the PINCH WORM GEAR as shown in Fig. 2-12-3 and install it.
3. Install the PINCH CAM HOLDER on the position shown in Fig. 2-12-4.
4. Move the PINCH RACK SLIDER in the direction shown by arrow in Fig. 2-12-5.
5. Make sure that the Catch (ⓓ) of the PINCH RACK SLIDER enters the Hole of the MAIN PLATE ASSY, as shown in Fig. 2-12-5.
6. Install the PINCH CAM LEVER shown in Fig. 2-12-1.
7. Install the PINCH CAM SPRING shown in Fig. 2-12-1.

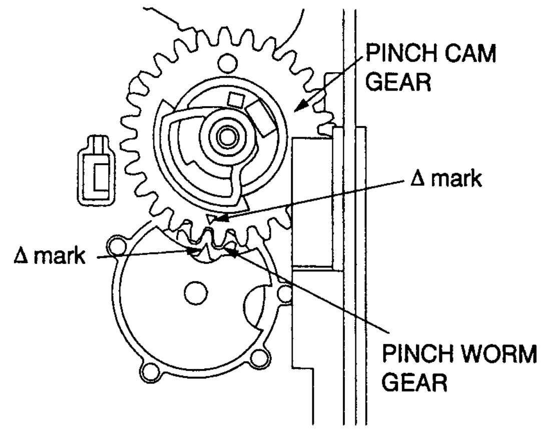

PINCH CAM GEAR
Δ mark
Δ mark
PINCH WORM GEAR

Fig. 2-12-3

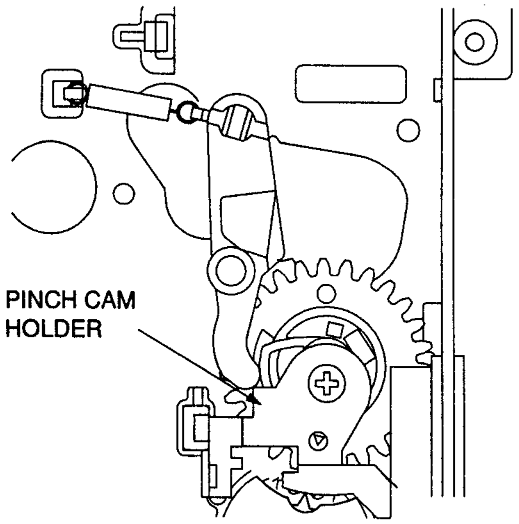

PINCH CAM HOLDER

Fig. 2-12-4

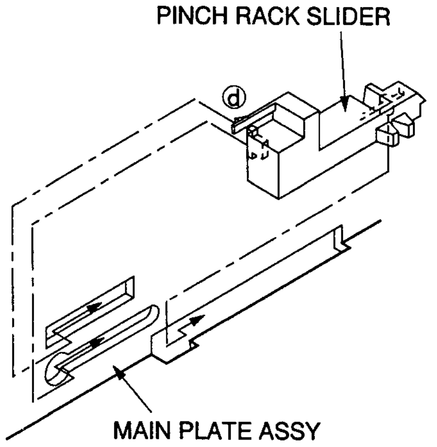

PINCH RACK SLIDER
ⓓ
MAIN PLATE ASSY

Fig. 2-12-5

8. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-12-6 on the new PINCH GEAR ARM 2.
9. Install the PINCH GEAR ARM 2 shown in Fig. 2-12-7 so that the boss of the PINCH GEAR ARM 2 and the shaft of the MAIN PLATE ASSY are positioned as shown.
10. Move the PINCH ARM UNIT in the opposite direction of arrow Ⓐ to install it as shown in Fig. 2-12-1.
11. Install the PINCH ARM CAP 2 shown in Fig. 2-12-1.

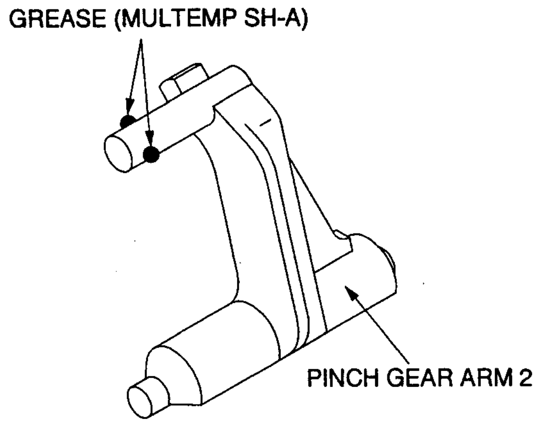

GREASE (MULTEMP SH-A)
PINCH GEAR ARM 2

Fig. 2-12-6

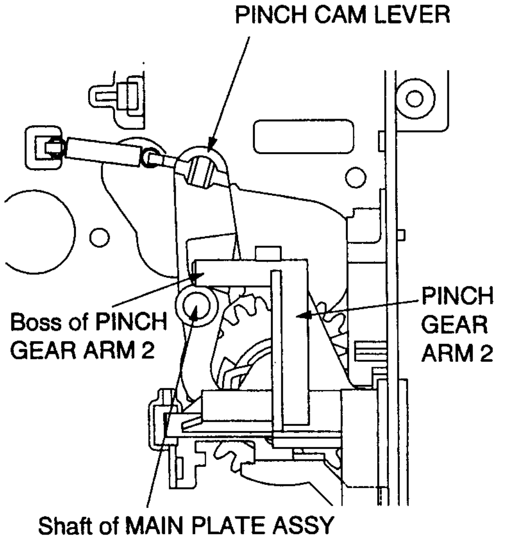

PINCH CAM LEVER
Boss of PINCH GEAR ARM 2
PINCH GEAR ARM 2
Shaft of MAIN PLATE ASSY

Fig. 2-12-7

2-13. GUIDE ARM ASSY (TU), GUIDE SPRING (TU), LOADING TG LEVER

SET POSITION : Normal

(Removal)

1. Remove the NYLON NUT, shown in Fig. 2-13-1 to remove the SL WASHER (ⓐ), the GUIDE ARM ASSY (TU) and GUIDE SPRING (TU).
2. Remove the CUT WASHER (ⓑ) holding the LOADING TG LEVER shown in Fig. 2-13-1.
3. To remove the two LOADING TG LEVER unfasten Catches (ⓒ) of the LOADING TG LEVER shown in Fig. 2-13-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-13-2 on the new LOADING TG LEVER.
2. Install the LOADING TG LEVER shown in Fig. 2-13-1.
3. Install the CUT WASHER (ⓑ) shown in Fig. 2-13-1 to fasten the LOADING TG LEVER.

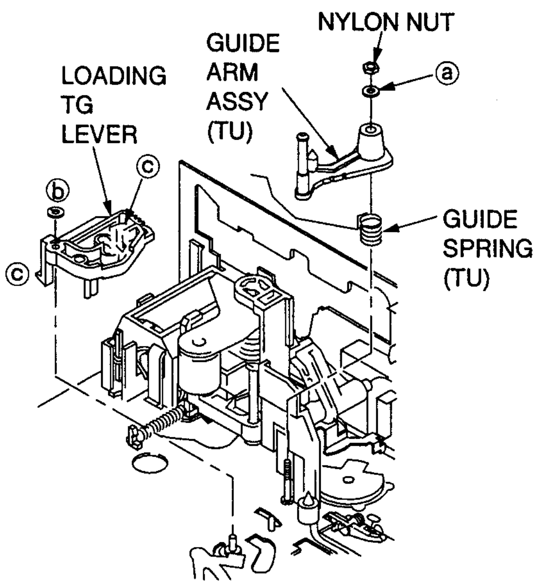

NYLON NUT
GUIDE ARM ASSY (TU)
LOADING TG LEVER
ⓐ
ⓑ
ⓒ
ⓒ
GUIDE SPRING (TU)

Fig. 2-13-1

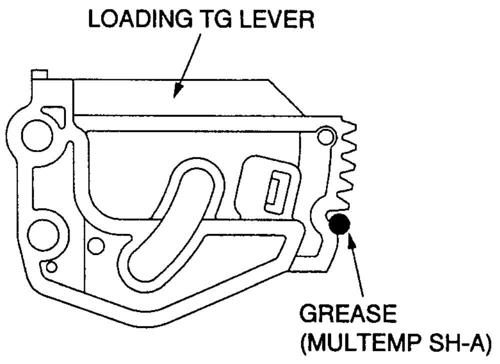

LOADING TG LEVER
GREASE (MULTEMP SH-A)

Fig. 2-13-2

4. Fix the GUIDE SPRING (TU) to the GUIDE ARM ASSY (TU) as shown in Fig. 2-13-3.
5. Fix the GUIDE ARM ASSY (TU) with the GUIDE SPRING (TU) attached, to the shaft of the MAIN PLATE ASSY, as shown in Fig. 2-13-1.
6. Install the GUIDE SPRING (TU) on the position shown in Fig. 2-13-4.

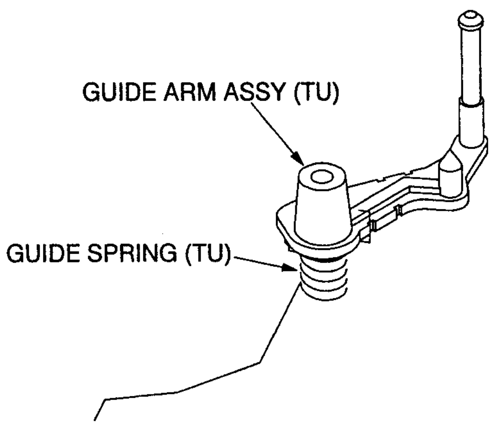

GUIDE ARM ASSY (TU)
GUIDE SPRING (TU)

Fig. 2-13-3

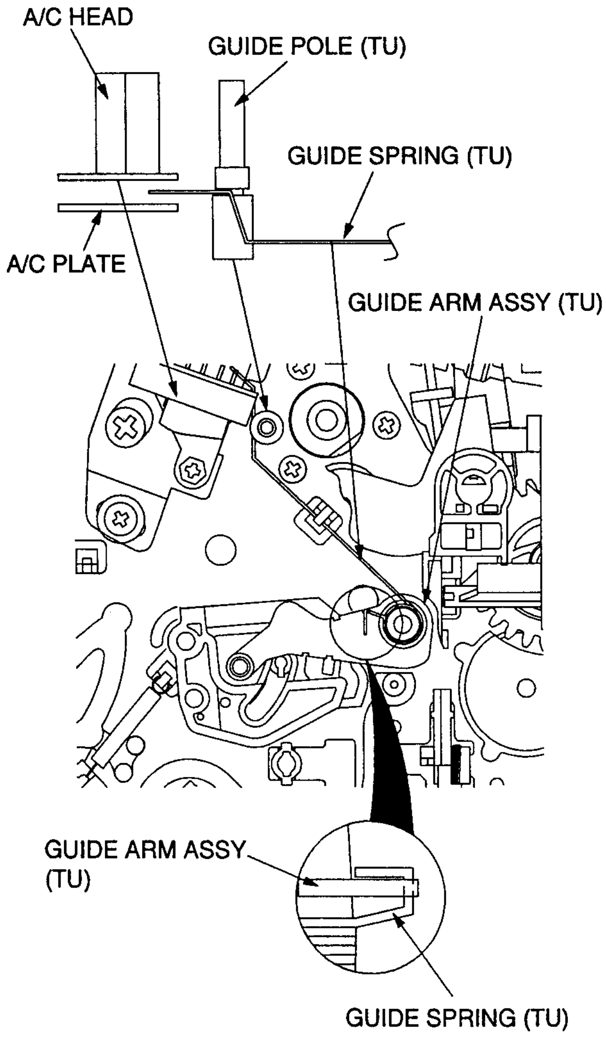

A/C HEAD
GUIDE POLE (TU)
GUIDE SPRING (TU)
A/C PLATE
GUIDE ARM ASSY (TU)
GUIDE ARM ASSY (TU)
GUIDE SPRING (TU)

Fig. 2-13-4

7. Install the GUIDE ARM ASSY (TU) so that the first tooth of the GEAR of the GUIDE ARM ASSY (TU), shown in Fig. 2-13-5, matches with Hole Ⓐ of the LOADING TG LEVER.
8. Install the SL WASHER (ⓐ) and NYLON NUT shown in Fig. 2-13-1.
9. Perform "Adjustment of GUIDE ARM ASSY (TU) Height" in Para. 3-5 of "Interchangeability Adjustment of the Mechanism".

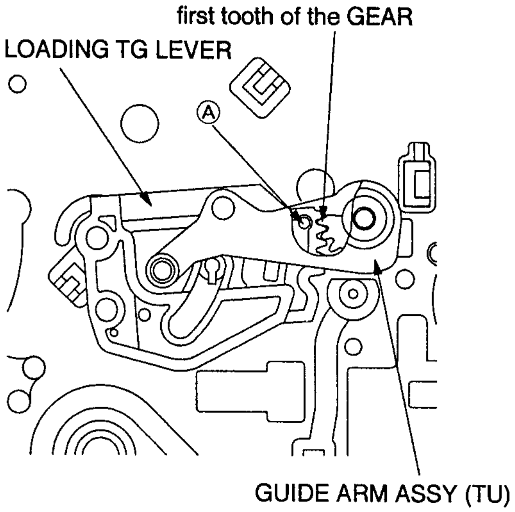

first tooth of the GEAR
LOADING TG LEVER
Ⓐ
GUIDE ARM ASSY (TU)

Fig. 2-13-5

2-14. REC SPRING, REC LEVER

SET POSITION : Upside down

(Removal)

1. Remove the REC SPRING shown in Fig. 2-14.
2. Move the REC LEVER in the direction shown by arrow Ⓐ until it strikes on the MAIN PLATE ASSY and remove it as shown in Fig. 2-14.

(Installation)

1. Insert the Catch of the REC LEVER, shown in Fig. 2-14, into the Hole of the MAIN PLATE ASSY and install the REC LEVER.
2. Install the REC SPRING shown in Fig. 2-14.

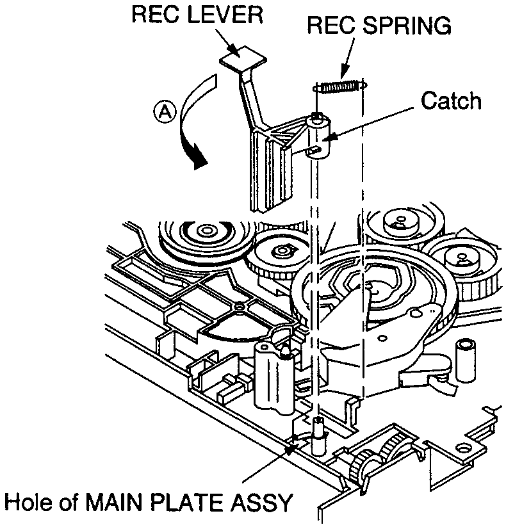

REC LEVER
REC SPRING
Catch
Ⓐ
Hole of MAIN PLATE ASSY

Fig. 2-14

2-15. REEL BELT, BELT PULLEY, SHIFT SPRING

SET POSITION : Upside down

(Removal)

1. Remove the REEL BELT shown in Fig. 2-15.
2. Remove the CUT WASHER (ⓐ) fastening the BELT PULLEY shown in Fig. 2-15, and remove the BELT PULLEY.
3. Remove the SHIFT SPRING shown in Fig. 2-15.

(Installation)

1. Install the SHIFT SPRING shown in Fig. 2-15.
2. Fasten the BELT PULLEY shown in Fig. 2-15.
3. Install the CUT WASHER (ⓐ) shown in Fig. 2-15 to fasten the BELT PULLEY.
4. Install the REEL BELT shown in Fig. 2-15.

Note : Do not get GREASE or OIL on the REAL BELT during installation.

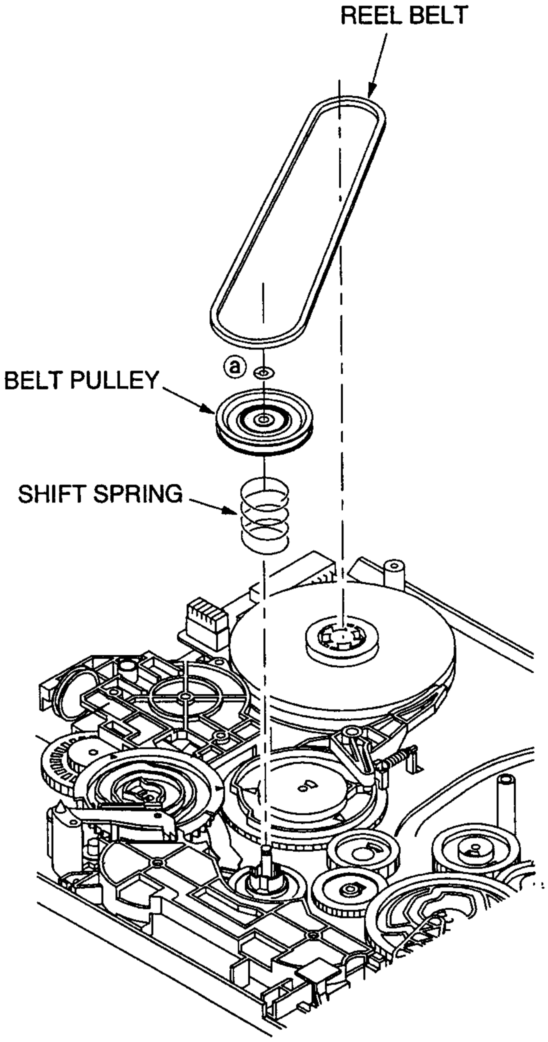


Fig. 2-15

2-16. CAPSTAN BRAKE SPRING, CAPSTAN BRAKE UNIT 2

SET POSITION : Upside down

To access CAPSTAN BRAKE SPRING and CAPSTAN BRAKE UNIT 2, remove the REEL BELT. (Para. 2-15)

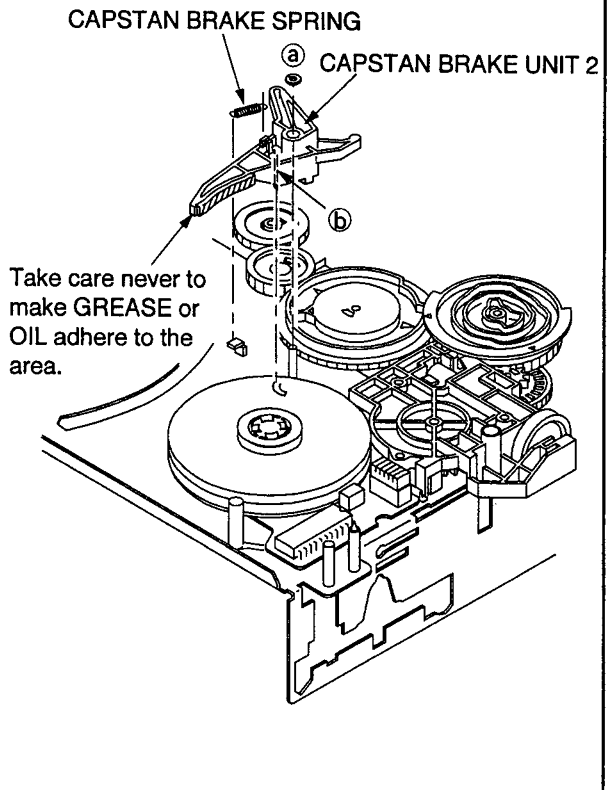

CAPSTAN BRAKE SPRING
ⓐ
CAPSTAN BRAKE UNIT 2
ⓑ
Take care never to make GREASE or OIL adhere to the area.

Fig. 2-16

(Removal)

1. Remove the CAPSTAN BRAKE SPRING shown in Fig. 2-16.
2. Remove the CUT WASHER (ⓐ) fastening the CAPSTAN BRAKE UNIT 2 shown in Fig. 2-16.
3. Use tweezers to unfasten Catch (ⓑ) on the surface of the CAPSTAN BRAKE UNIT 2 shown in Fig. 2-16, and remove the CAPSTAN BRAKE UNIT 2.

(Installation)

1. Install the CAPSTAN BRAKE UNIT 2 shown in Fig. 2-16.

Note : Do not get GREASE or OIL on the area specified in Fig. 2-16 during installation of the CAPSTAN BRAKE UNIT 2.

2. Install the CUT WASHER (ⓐ) shown in Fig. 2-16 to fasten the CAPSTAN BRAKE UNIT 2.
3. Install the CAPSTAN BRAKE SPRING shown in Fig. 2-16.

2-17. MODE HOLDER, REEL LOCK LEVER, MODE GEAR, F/L DRIVE GEAR, F/L DRIVE LEVER, WORM PULLEY UNIT, LOADING WORM GEAR

SET POSITION : Upside down

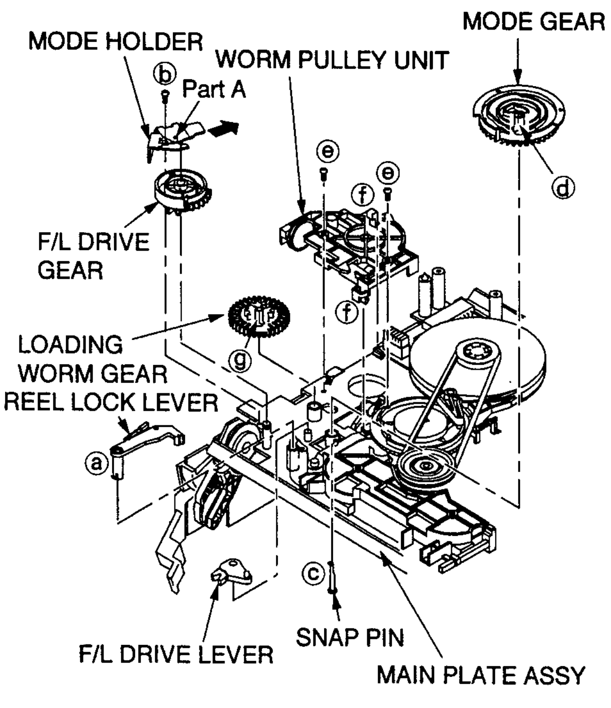

MODE HOLDER
ⓑ
Part A
WORM PULLEY UNIT
MODE GEAR
ⓓ
ⓔ
ⓔ
ⓕ
ⓕ
F/L DRIVE GEAR
LOADING WORM GEAR
ⓖ
REEL LOCK LEVER
ⓐ
ⓒ
F/L DRIVE LEVER
SNAP PIN
MAIN PLATE ASSY

Fig. 2-17-1

(Removal)

1. Use tweezers to unfasten Catch (ⓐ) on the surface of the REEL LOCK LEVER shown in Fig. 2-17-1, and remove the REEL LOCK LEVER.
2. Remove the MODE HOLDER fastening screw (ⓑ) shown in Fig. 2-17-1, and remove the MODE HOLDER.
3. Use tweezers to unfasten Catch (ⓒ) of the SNAP PIN shown in Fig. 2-17-1, and remove the SNAP PIN.
4. Use tweezers to Unfasten Catch (ⓓ) on the surface of the MODE GEAR, shown in Fig. 2-17-1, and remove the MODE GEAR.
5. Remove the F/L DRIVE GEAR, shown in Fig. 2-17-1, from the shaft of the MAIN PLATE ASSY.
6. Remove the F/L DRIVE LEVER shown in Fig. 2-17-1.

7. Remove the two WORM PULLEY UNIT fastening screws (ⓔ) shown in Fig. 2-17-1.
8. Remove the LOADING BELT.
   (Refer to Para. 2-11 for the removal method.)
9. Unfasten the two Catches (ⓕ) of the WORM PULLEY UNIT shown in Fig. 2-17-1 to remove the WORM PULLEY UNIT.
10. Unfasten the Catch (ⓖ) on the surface of the LOADING WORM GEAR, shown in Fig. 2-17-1, and remove the LOADING WORM GEAR.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-17-2 on the new LOADING WORM GEAR.
2. Install the LOADING WORM GEAR shown in Fig. 2-17-1.
3. Turn the WORM PULLEY shown in Fig. 2-17-3 so that the Round Hole on PINCH WORM GEAR matches with that on WORM HOLDER.
4. Install the WORM PULLEY UNIT so that the Δ mark on the LOADING WORM GEAR, shown in Fig. 2-17-4, matches with the Part A.
5. Fasten the LOADING BELT. (Refer to Para. 2-11.)
6. Install the F/L DRIVE LEVER shown in Fig. 2-17-1.

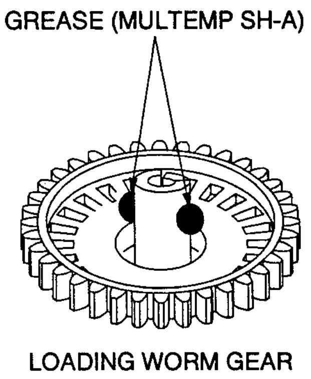

GREASE (MULTEMP SH-A)
LOADING WORM GEAR

Fig. 2-17-2

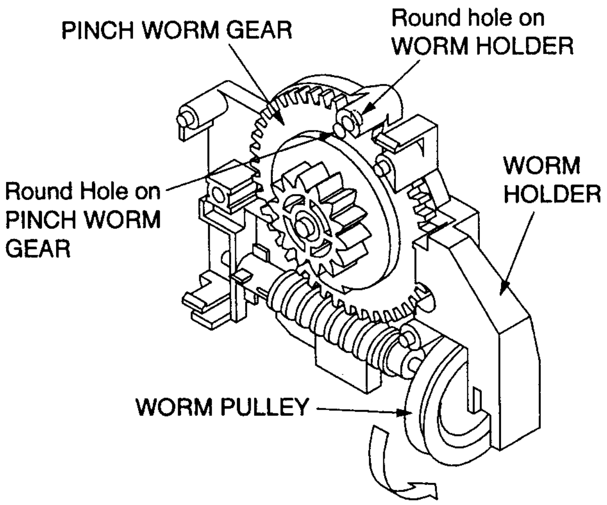

PINCH WORM GEAR
Round hole on WORM HOLDER
WORM HOLDER
Round Hole on PINCH WORM GEAR
WORM PULLEY

Fig. 2-17-3

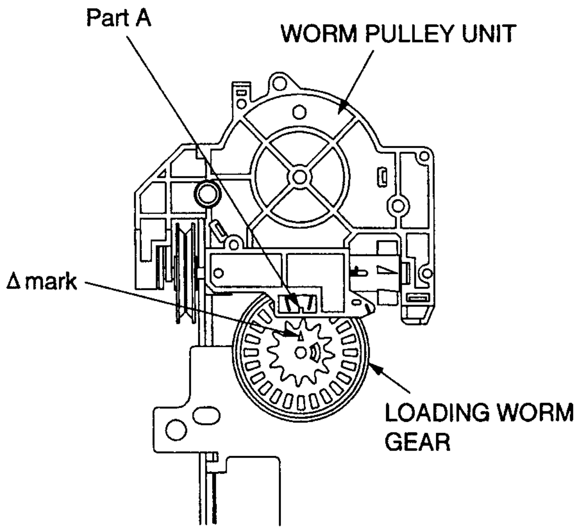

Part A
WORM PULLEY UNIT
Δ mark
LOADING WORM GEAR

Fig. 2-17-4

7. Fully move the F/L DRIVE LEVER shown in Fig. 2-17-5, in the direction shown by arrow Ⓐ.
8. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-17-6 on the new F/L DRIVE GEAR.
9. Move the F/L ARM UNIT (TU) shown in Fig. 2-17-7, in the direction shown by arrow Ⓐ.

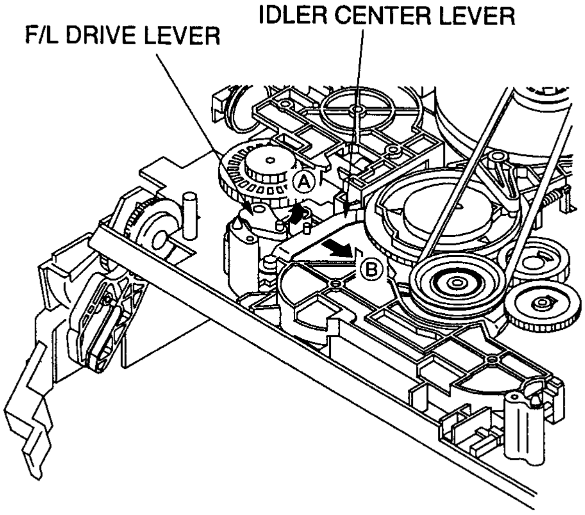
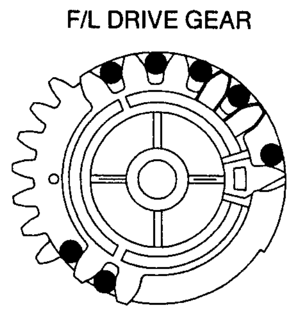

IDLER CENTER LEVER
F/L DRIVE LEVER
Ⓐ
Ⓑ

Fig. 2-17-5


F/L DRIVE GEAR

Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-17-6

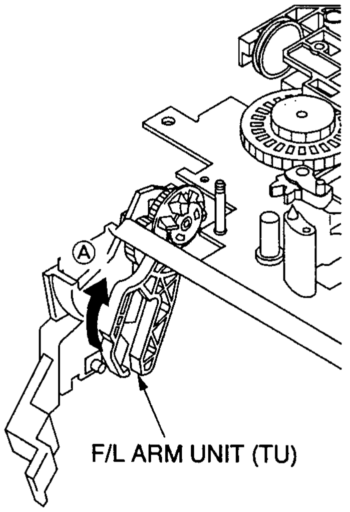

Ⓐ
F/L ARM UNIT (TU)

Fig. 2-17-7

10. Install the F/L DRIVE GEAR so that the first tooth of the gear of the F/L ARM UNIT (TU) matches with the II mark on the F/L DRIVE GEAR, as shown in Fig. 2-17-8.
11. Fully move the IDLER CENTER LEVER, shown in Fig. 2-17-5, in the direction shown by arrow Ⓑ.
12. Apply GREASE (MULTEMP SH-A) [859D055080] to the area shown in Fig. 2-17-9 on the new MODE GEAR.
13. Install the MODE GEAR shown in Fig. 2-17-10 so that ;
    - Δ mark on the Part A of the MODE GEAR matches with Δ mark on the Part B of the CAM GEAR (TU).
    - Δ mark on the Part C of the MODE GEAR points to the centre of the LOADING WORM GEAR.
    - Δ mark on the Part D of the MODE GEAR matches with the ○ mark on the Part E of the F/L DRIVE GEAR.
14. Make sure that the Δ mark on the PINCH WORM GEAR, shown in Fig. 2-12-3, matches with the Δ mark on the PINCH CAM GEAR .
15. Push the SNAP PIN, shown in Fig. 2-17-1, into the centre hole of the MODE GEAR.
16. Move the MODE HOLDER shown in Fig. 2-17-1, in the direction shown by arrow so that the Part A is fixed to the shaft of the MAIN PLATE ASSY and install it.

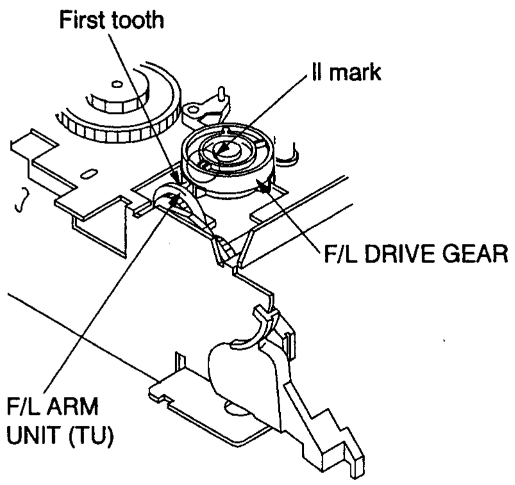
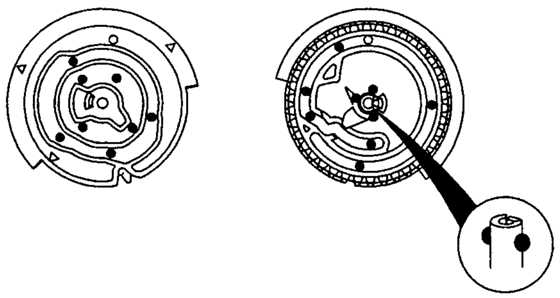

First tooth
II mark
F/L DRIVE GEAR
F/L ARM
UNIT (TU)

Fig. 2-17-8



Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-17-9

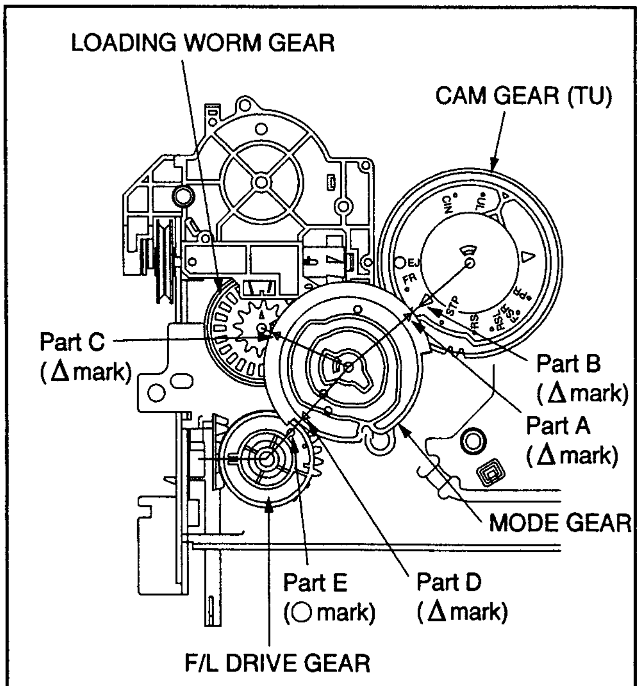

LOADING WORM GEAR
CAM GEAR (TU)
Part C
(Δmark)
Part B
(Δmark)
Part A
(Δmark)
MODE GEAR
Part E
(○mark)
Part D
(Δmark)
F/L DRIVE GEAR

Fig. 2-17-10

17. Install the REEL LOCK LEVER so that the pins on the Parts F and G of the REEL LOCK LEVER, shown in Fig. 2-17-11, enter the Cam Groove of the MODE GEAR.

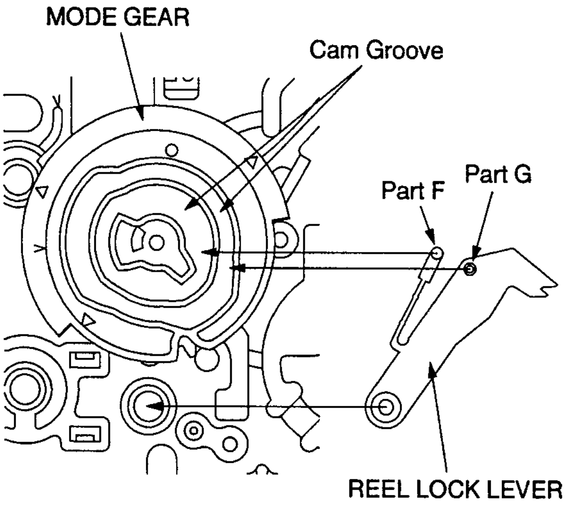

MODE GEAR
Cam Groove
Part F
Part G
REEL LOCK LEVER

Fig. 2-17-11

2-18. CONTROL WIND LEVER, TENSION LEVER UNIT

SET POSITION : Upside down

(Removal)

1. Use tweezers to unfasten Catch (ⓐ) on the surface of the CONTROL WIND LEVER, shown in Fig. 2-18-1, and remove the CONTROL WIND LEVER.
2. Remove the TENSION LEVER UNIT shown in Fig. 2-18-1.

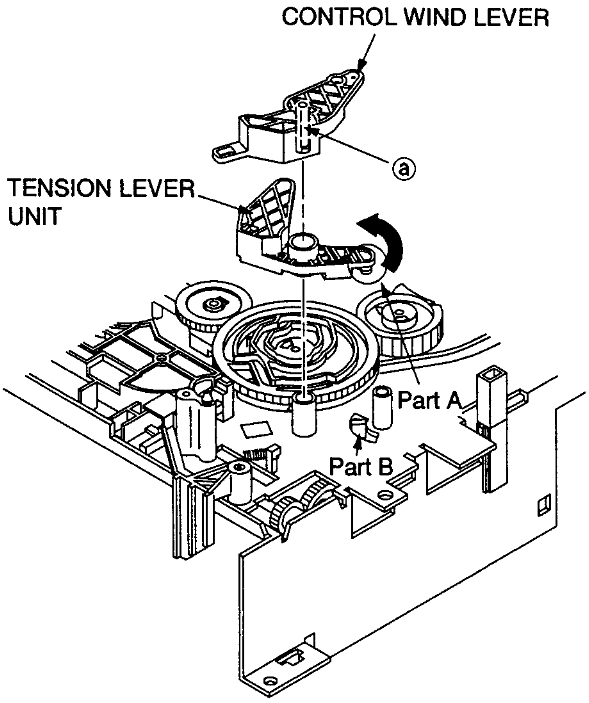
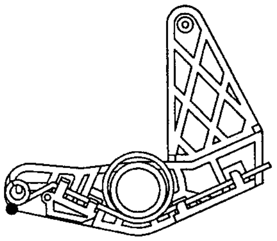

CONTROL WIND LEVER
ⓐ
TENSION LEVER UNIT
Part A
Part B

Fig. 2-18-1

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-18-2 on the new TENSION LEVER UNIT.
2. Install the TENSION LEVER UNIT shown in Fig. 2-18-1, by the following, procedure :
   - Make sure the pin on the Part A of the TENSION LEVER UNIT, shown in Fig. 2-18-3 enters the Cam Groove on the CAM GEAR (SP).
   - Move the Part A of the spring of the TENSION LEVER UNIT, shown in Fig. 2-18-1 in the direction shown by arrow. Install the TENSION LEVER UNIT so that the Part A of the spring is hooked to the Part B of the TENSION ARM.
3. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-18-4 on the new CONTROL WIND LEVER.
4. Install the CONTROL WIND LEVER so that the pin on the Part B on the CONTROL WIND LEVER shown in Fig. 2-18-3, enters the Cam Groove on the CAM GEAR (SP), and that the pin of the Part D of the WIND LEVER UNIT enters the Hole of the Part C on the CONTROL WIND LEVER.



Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-18-2

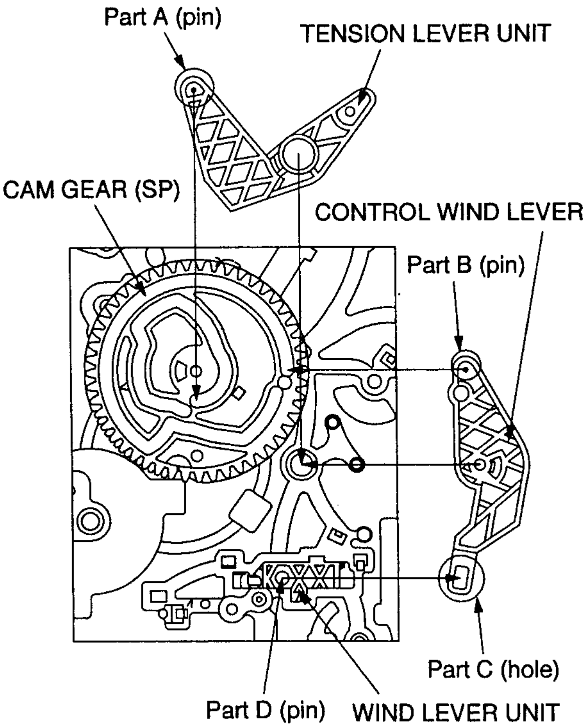
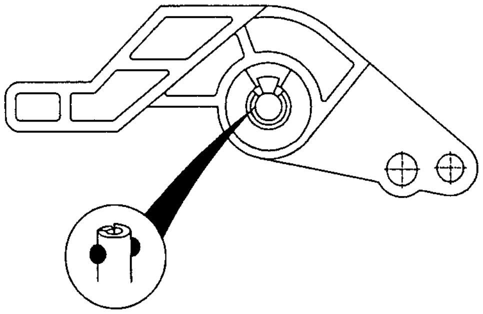


Fig. 2-18-3



Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-18-4

2-19.PHOTO GUIDE UNIT (SP), PHOTO GUIDE UNIT (TU)

SET POSITION : Upside down

To access PHOTO GUIDE UNIT(SP) and PHOTO GUIDE UNIT(TU), remove the following parts :

- LOADING BELT (Para. 2-11)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- WORM PULLEY UNIT (Para. 2-17)

(Removal)

1. Use tweezers to unfasten Catch (ⓐ) of the PHOTO GUIDE UNIT (SP), shown in Fig. 2-19-1, and remove the PHOTO GUIDE UNIT (SP) in the direction shown by arrow.
2. Remove the PHOTO GUIDE UNIT (TU), shown in Fig. 2-19-2, in the direction shown by arrow.

(Installation)

1. Push the PHOTO GUIDE UNIT (TU) into the DECK to the bottom, with the Part A shown in Fig. 2-19-2 toward the inside of DECK.

Note : Do not touch the transparent part A of the PHOTO GUIDE UNIT (TU).

2. Push the PHOTO GUIDE UNIT (SP) into the DECK so that the Catch (ⓐ) is hooked, with the Part A shown in Fig. 2-19-1 toward the inside of DECK.

Note : Do not touch the transparent part A of the PHOTO GUIDE UNIT(SP).

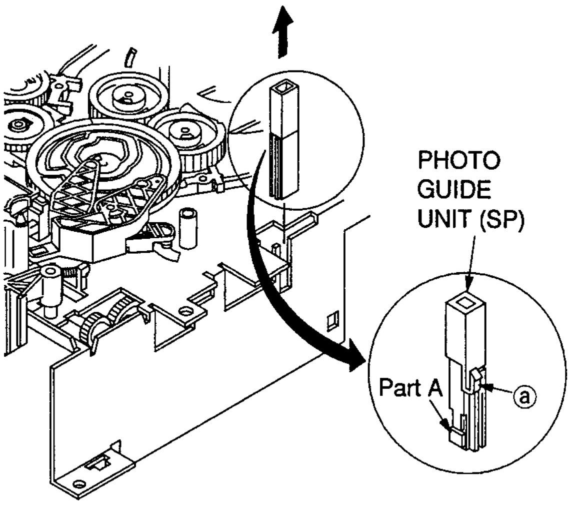


Fig. 2-19-1

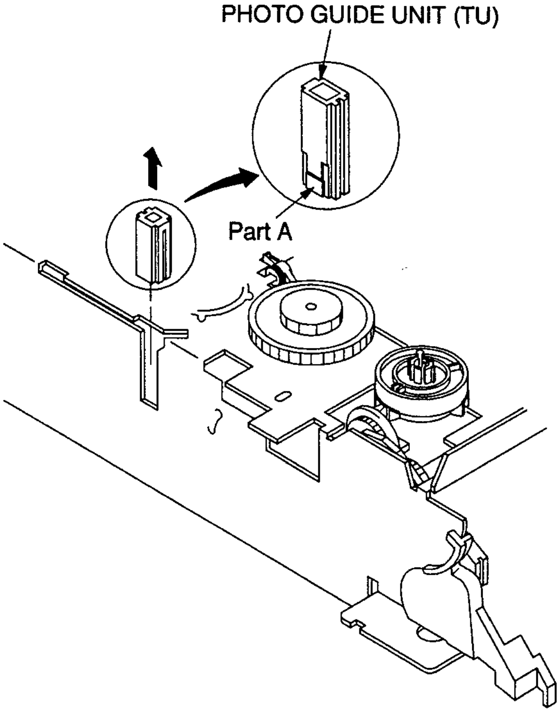


Fig. 2-19-2

2-20. PLATE LD, LOADING GEAR, LAMP LOADING GEAR

SET POSITION : Upside down

To access LOADING GEAR and LAMP LOADING GEAR, remove the following parts :

- LAMP GUIDE (Para. 2-7)
- REEL BELT (Para. 2-15)

(Removal)

1. Release the catches (©) of four SNAP PIN LDs securing PLATE LD as shown in Fig. 2-20-1,and remove SNAP PIN LD.
2. Use tweezers to unfasten Catch (ⓐ) on the surface of the LOADING GEAR, shown in Fig. 2-20-1, and remove the LOADING GEAR.
3. Use tweezers to unfasten Catch (ⓑ) on the surface of the LAMP LOADING GEAR, shown in Fig. 2-20-1, and remove the LAMP LOADING GEAR.

(Installation)

1. Install the PLATE LD and four SNAP PIN LDs shown in Fig. 2-20-1.
2. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-20-2 on the new LAMP LOADING GEAR .
3. Install the LAMP LOADING GEAR shown in Fig. 2-20-1.
4. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-20-2 on the new LOADING GEAR .
5. Install the LOADING GEAR shown in Fig. 2-20-1.

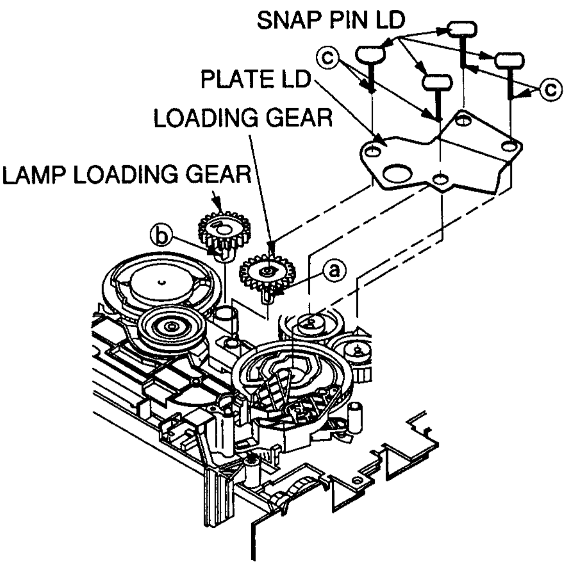


Fig. 2-20-1

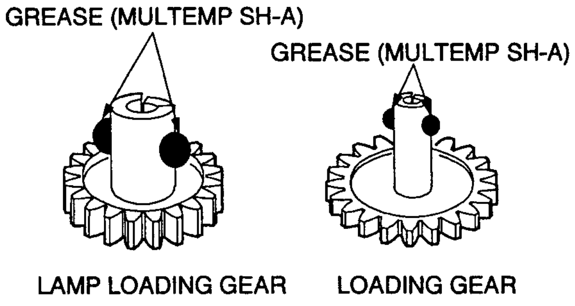


Fig. 2-20-2

2-21. CAM GEAR (TU)

SET POSITION : Upside down

To access the CAM GEAR(TU), remove the following parts.

- LOADING BELT (Para. 2-11)
- REEL BELT (Para. 2-15)
- CAPSTAN BRAKE SPRING (Para. 2-16)
- CAPSTAN BRAKE UNIT 2 (Para. 2-16)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)

(Removal)

1. Use tweezers to unfasten the Catch (ⓐ) on the surface of the CAM GEAR (TU), shown in Fig. 2-21-1, and remove the CAM GEAR (TU).

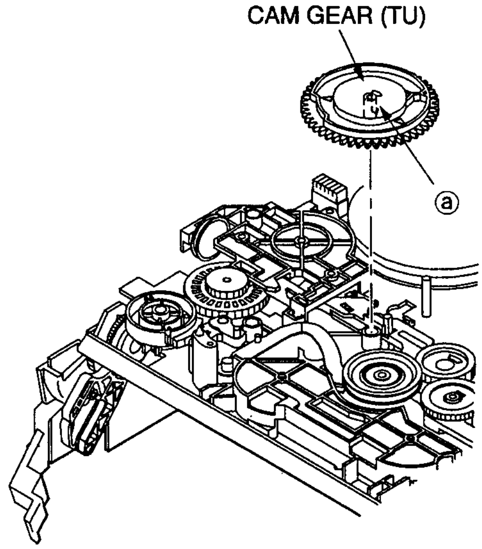


Fig. 2-21-1

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-21-2 on the new CAM GEAR (TU).
2. Set the CAM GEAR (SP), shown in Fig. 2-21-3, so that the Δ mark on the Part A of it points to the centre of the LOADING GEAR.
3. Install the CAM GEAR (TU), shown in Fig. 2-21-3, so that the Δ mark on the Part B of it points to the centre of the LAMP LOADING GEAR.

Apply GREASE (MULTEMP SH-A) to the area ● .

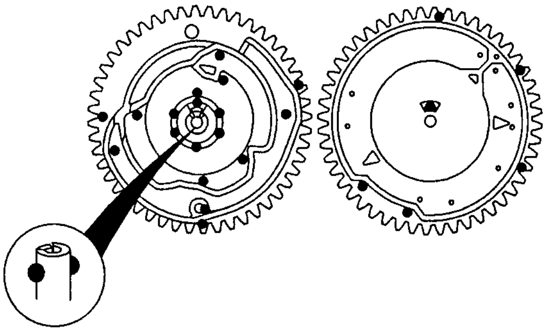


Fig. 2-21-2

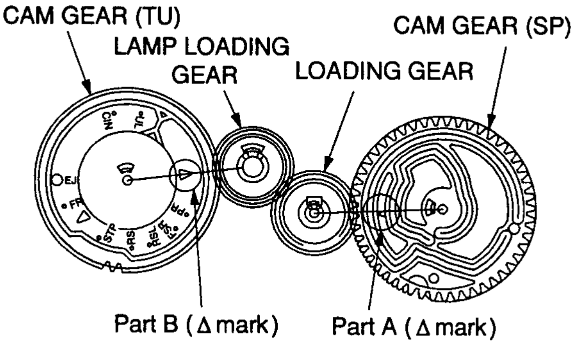

CAM GEAR (TU)
LAMP LOADING GEAR
CAM GEAR (SP)
LOADING GEAR
Part B (Δ mark)
Part A (Δ mark)

Fig. 2-21-3

2-22. PHOTO UNIT, REEL GEAR UNIT (TU), REEL GEAR UNIT (SP)

SET POSITION : Upside down

(Removal)

1. Move the REC LEVER, shown in Fig. 2-14-1, in the direction shown by arrow Ⓐ. Unfasten Catches (ⓐ) of the PHOTO UNIT, and Catches (ⓑ) of the MAIN PLATE ASSY, shown in Fig. 2-22-1, to remove the PHOTO UNIT.
2. Remove the REEL GEAR UNIT (TU) shown in Fig. 2-22-1.
3. Remove the REEL GEAR UNIT (SP) shown in Fig. 2-22-1.

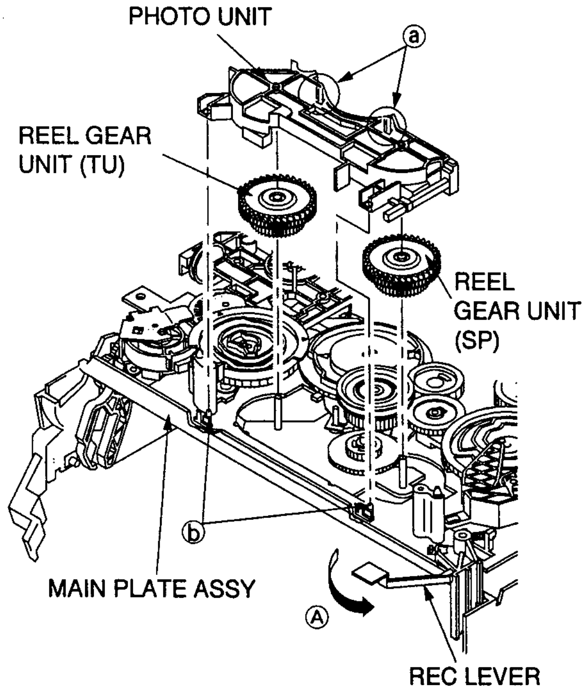


PHOTO UNIT
ⓐ
REEL GEAR UNIT (TU)
REEL GEAR UNIT (SP)
ⓑ
MAIN PLATE ASSY
Ⓐ
REC LEVER

Fig. 2-22-1

(Installation)

1. Apply OIL (FLOIL 948P) [859D154020] to the shaft on the MAIN PLATE ASSY, shown in Fig.2-22-2.
2. Install the REEL GEAR UNIT (SP) shown in Fig. 2-22-2.

Note : Make sure the colour of the spring is correct, refer to the table in Fig. 2-22-2, when installing the REEL GEAR UNIT (SP).

3. Apply OIL (FLOIL 948P) [859D154020] to the shaft on the MAIN PLATE ASSY, refer to Fig.2-22-2.
4. Install the REEL GEAR UNIT (TU) shown in Fig. 2-22-1.

Note : Make sure the colour of the spring is correct. Refer to the table in Fig. 2-22-2, when installing the REEL GEAR UNIT(TU).

5. Apply a small quantity of OIL (FLOIL 948P) [859D154020] to the area specified in Fig. 2-22-3 on the new PHOTO UNIT.
6. Install the PHOTO UNIT shown in Fig. 2-22-1.

Part Name	Colour of Spring
REEL GEAR UNIT (SP)	Gold
REEL GEAR UNIT (TU)	Silver

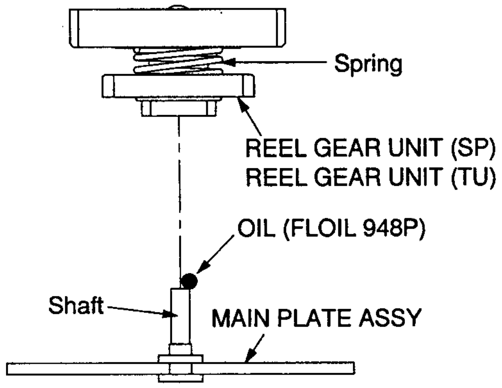

Spring
REEL GEAR UNIT (SP)
REEL GEAR UNIT (TU)
OIL (FLOIL 948P)
Shaft
MAIN PLATE ASSY

Fig. 2-22-2

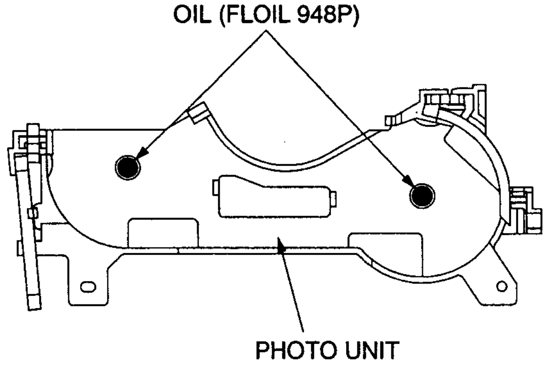

OIL (FLOIL 948P)
PHOTO UNIT

Fig. 2-22-3

2-23.IDLER CENTER LEVER

SET POSITION : Upside down

To access IDLER CENTER LEVER, remove the following Parts :

- LOADING BELT (Para. 2-11)
- REEL BELT (Para. 2-15)
- CAPSTAN BRAKE SPRING (Para. 2-16)
- CAPSTAN BRAKE UNIT 2 (Para. 2-16)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- CAM GEAR (TU) (Para. 2-21)
- PHOTO UNIT (Para. 2-22)

(Removal)

1. Remove the IDLER CENTER LEVER shown in Fig. 2-23-1.

(Installation)

1. Insert the Part A of the IDLER CENTER LEVER, shown in Fig. 2-23-2 into the Part B of the IDLER UNIT, when installing the IDLER CENTER LEVER.

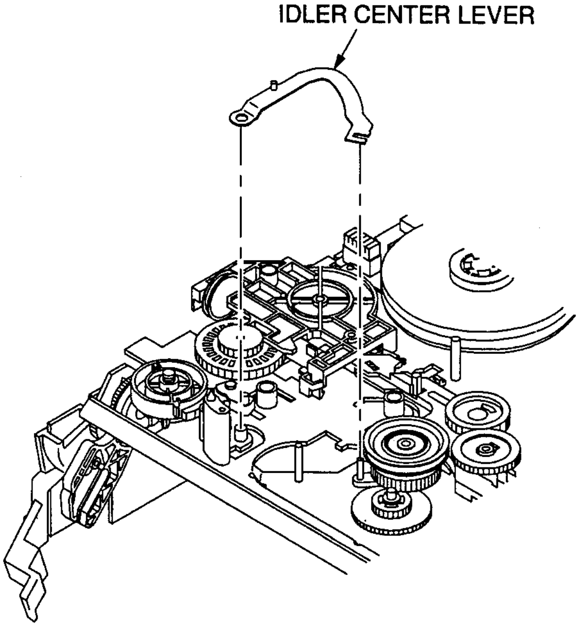

IDLER CENTER LEVER

Fig. 2-23-1

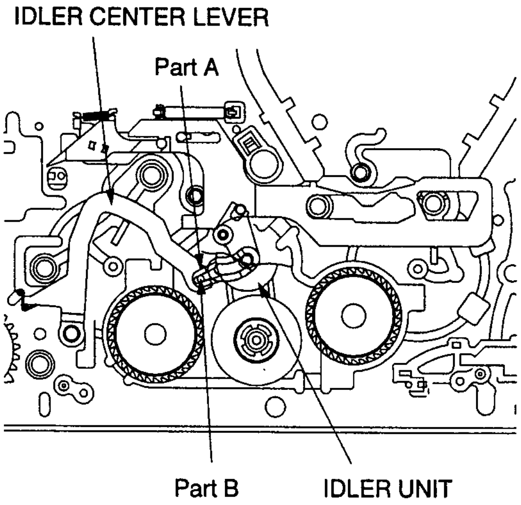

IDLER CENTER LEVER
Part A
Part B
IDLER UNIT

Fig. 2-23-2

2-24. PULLEY GEAR, IDLER UNIT

SET POSITION : Upside down

To access the PULLEY GEAR and IDLER UNIT, remove following parts :

- LOADING BELT (Para. 2-11)
- REEL BELT (Para. 2-15)
- CAPSTAN BRAKE SPRING (Para. 2-16)
- CAPSTAN BRAKE UNIT 2 (Para. 2-16)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- CAM GEAR (TU) (Para. 2-21)
- PHOTO UNIT (Para. 2-22)
- IDLER CENTER LEVER (Para. 2-23)

(Removal)

1. Remove the PULLEY GEAR shown in Fig. 2-24.
2. Remove the IDLER UNIT shown in Fig. 2-24.

(Installation)

1. Apply OIL (FLOIL 948P) [859D154020] to the shaft for the IDLER UNIT, shown in Fig.2-24.
2. Apply OIL (FLOIL 948P) [859D154020] to the area specified in Fig. 2-24 on the new IDLER UNIT.
3. Install the IDLER UNIT shown in Fig. 2-24.
4. Install the PULLEY GEAR shown in Fig. 2-24.

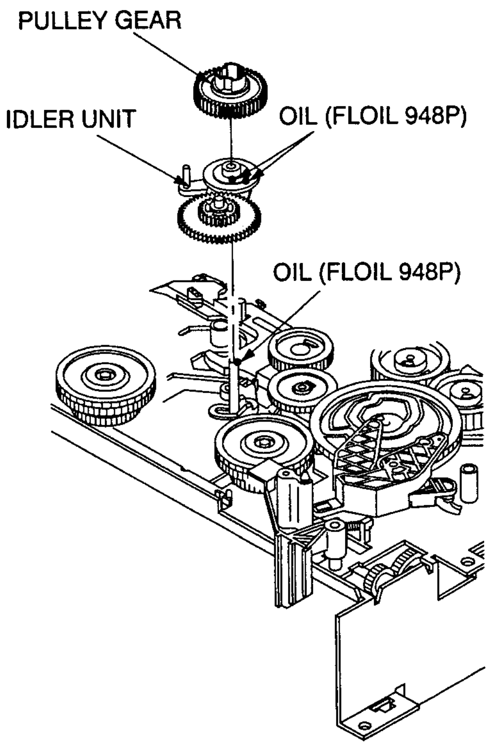


Fig. 2-24

2-25. F/L ARM UNIT (SP)

SET POSITION : Normal

To access the F/L ARM UNIT(SP), remove the following parts :

- STAY PLATE (Para. 2-2)
- BOTTOM UNIT (Para. 2-3)

(Removal)

1. Move the F/L ARM UNIT (SP) fully in the direction shown by arrow Ⓐ, as shown in Fig. 2-25-1.
2. Unfasten the Catch (ⓐ) of the F/L ARM UNIT (SP), shown in Fig. 2-25-1, to remove the F/L ARM UNIT (SP).

(Installation)

1. Move the F/L ARM UNIT (TU) fully in the direction shown by arrow Ⓐ, as shown in Fig. 2-26-1.
2. Install the F/L ARM UNIT (SP) so that the gear of the F/L ARM UNIT (SP) and that of the SYNC GEAR ASSY are engaged as shown in Fig. 2-25-2.

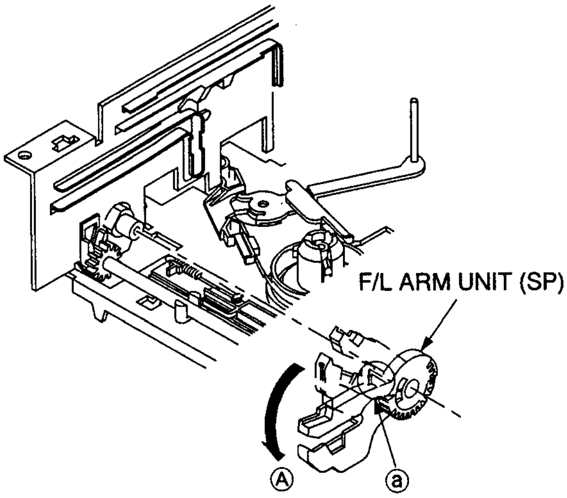


Fig. 2-25-1

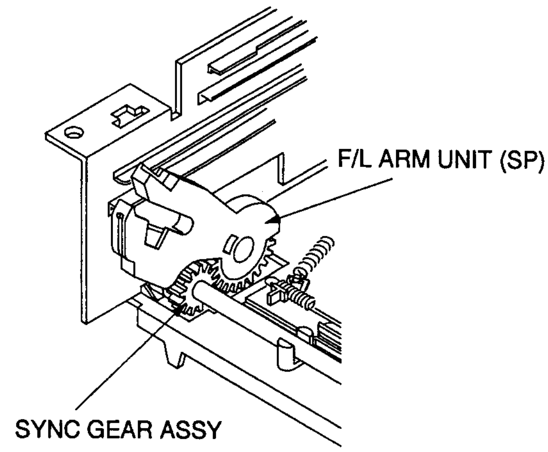


Fig. 2-25-2

2-26. F/L ARM UNIT (TU)

SET POSITION : Normal

To access the F/L ARM UNIT(TU), remove following parts :

- STAY PLATE (Para. 2-2)
- BOTTOM UNIT (Para. 2-3)
- LOADING BELT (Para. 2-11)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- F/L DRIVE GEAR (Para. 2-17)
- F/L DRIVE LEVER (Para. 2-17)

(Removal)

1. Move the F/L ARM UNIT (TU) fully in the direction shown by arrow Ⓐ, as shown in Fig. 2-26-1.
2. Unfasten the Catch (ⓐ) of the F/L ARM UNIT (TU), shown in Fig. 2-26-1, to remove the F/L ARM UNIT (TU).

(Installation)

1. Move the F/L ARM UNIT (SP), shown in Fig. 2-25-1, fully in the direction shown by arrow Ⓐ.
2. Install the F/L ARM UNIT (TU) in the position shown in Fig. 2-26-2.

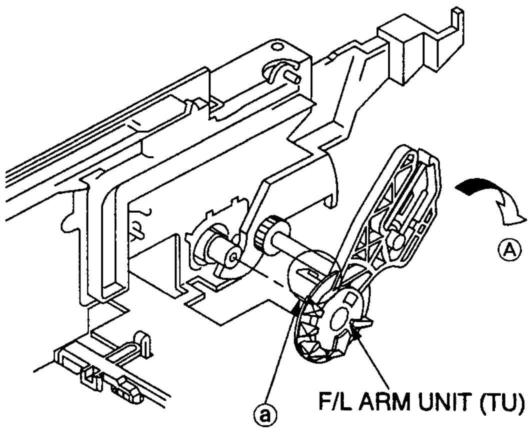
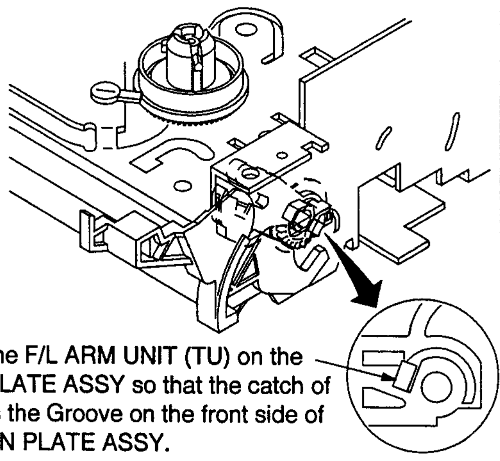


Fig. 2-26-1



Install the F/L ARM UNIT (TU) on the MAIN PLATE ASSY so that the catch of it enters the Groove on the front side of the MAIN PLATE ASSY.

Fig. 2-26-2

2-27. SYNC GEAR ASSY

SET POSITION : Normal

To access SYNC GEAR ASSY, remove the following parts :

- STAY PLATE (Para. 2-2)
- BOTTOM UNIT (Para. 2-3)
- LOADING BELT (Para. 2-11)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- F/L DRIVE GEAR (Para. 2-17)
- F/L ARM UNIT (SP) (Para. 2-25)
- F/L ARM UNIT (TU) (Para. 2-26)

(Removal)

1. Unfasten the Catch (ⓐ) of the MAIN PLATE ASSY as shown in Fig. 2-27-1. Move the SYNC GEAR ASSY in the direction shown by arrow Ⓐ to remove it.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-27-2 on the MAIN PLATE ASSY.
2. Move the SYNC GEAR ASSY, shown in Fig. 2-27-1, in the opposite direction against arrow Ⓐ to install it.

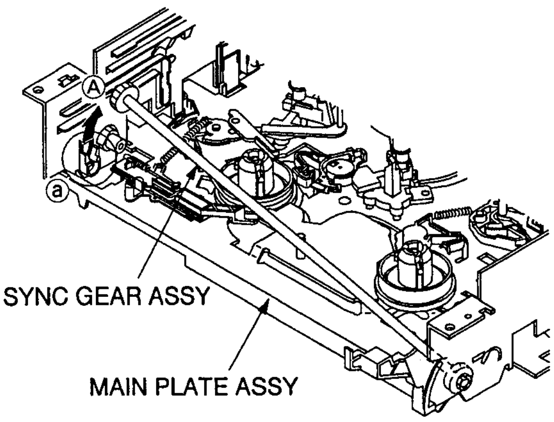

Ⓐ
ⓐ
SYNC GEAR ASSY
MAIN PLATE ASSY

Fig. 2-27-1

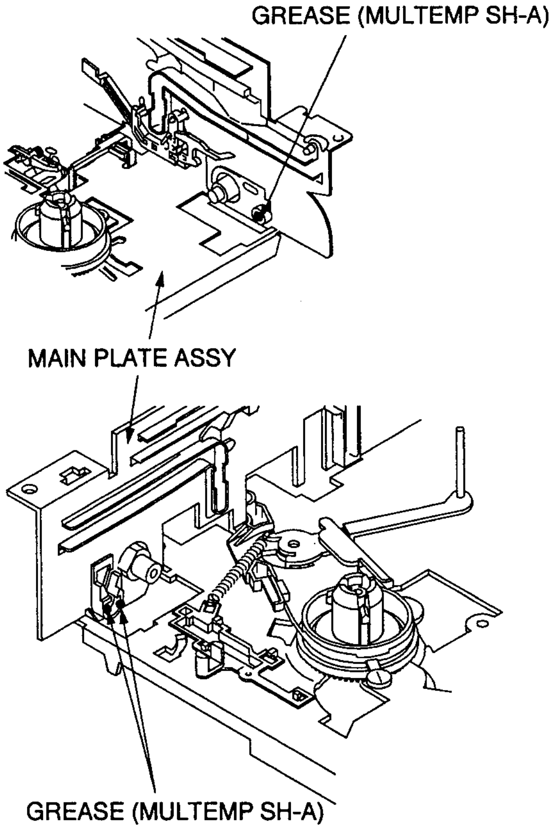

GREASE (MULTEMP SH-A)
MAIN PLATE ASSY
GREASE (MULTEMP SH-A)

Fig. 2-27-2

2-28. F/L DOOR ARM

SET POSITION : Normal

To access the F/L DOOR ARM, remove the following parts :

- STAY PLATE (Para. 2-2)
- BOTTOM UNIT (Para. 2-3)
- LOADING BELT (Para. 2-11)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- F/L DRIVE GEAR (Para. 2-17)
- F/L ARM UNIT (SP) (Para. 2-25)
- F/L ARM UNIT (TU) (Para. 2-26)
- SYNC GEAR ASSY (Para. 2-27)

(Removal)

1. Remove the F/L DOOR ARM shown in Fig. 2-28.

(Installation)

1. Install the F/L DOOR ARM shown in Fig. 2-28.

2-29. WIND LEVER UNIT

SET POSITION : Normal

To access the WIND LEVER UNIT, remove the following parts :

- STAY PLATE (Para. 2-2)
- BOTTOM UNIT (Para. 2-3)
- CONTROL WIND LEVER (Para. 2-18)

(Removal)

1. To remove, move the WIND LEVER UNIT in the direction of arrow, as shown in Fig. 2-29-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-29-2 on the MAIN PLATE ASSY.
2. Set the WIND LEVER UNIT so that each of three notches (ⓐ) matches with the corresponding Catches (ⓑ) on the MAIN PLATE ASSY, as shown in Fig. 2-29-1. Move the WIND LEVER UNIT in the opposite direction shown by arrow to install it.

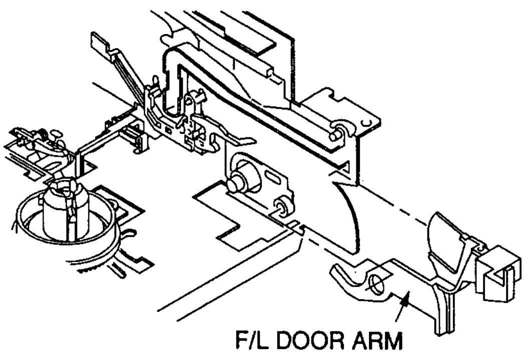


Fig. 2-28

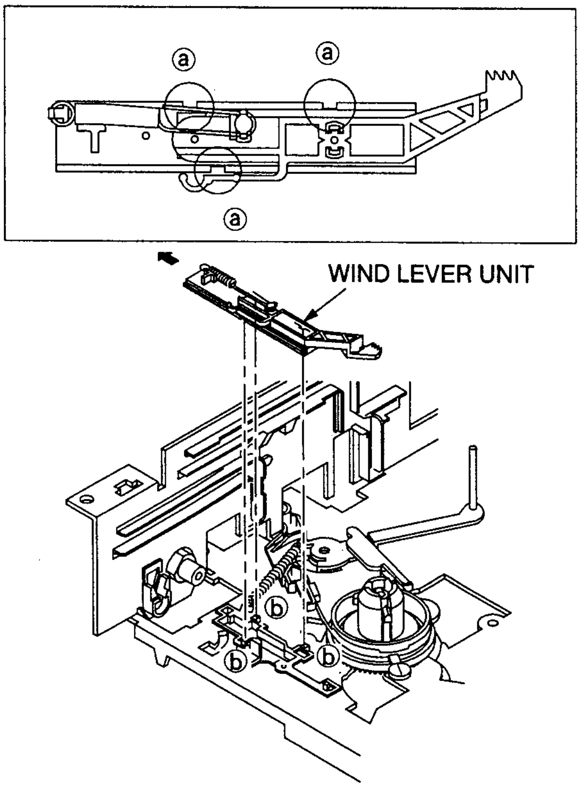
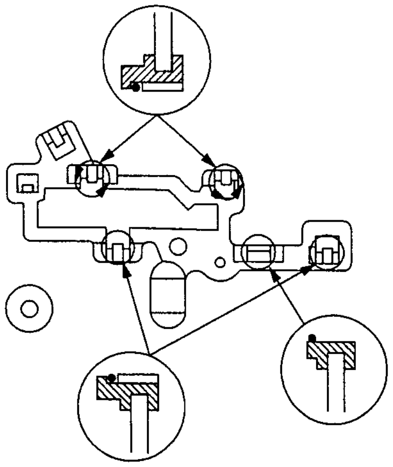


Fig. 2-29-1



Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-29-2

2-30. LOADING LOCK SPRING, LOADING LOCK LEVER

SET POSITION : Normal

To access the LOADING LOCK SPRING and LOADING LOCK LEVER, remove the following parts :

- MODE POSITION GUIDE (Para. 2-7)
- LOADING BELT (Para. 2-11)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- WORM PULLEY UNIT (Para. 2-17)

(Removal)

1. Remove the Part A of the LOADING LOCK SPRING, shown in Fig. 2-30-1, through the Hole of the MAIN PLATE ASSY.
2. Move the LOADING LOCK LEVER in the direction shown by arrow Ⓐ while pushing the Part B of it to remove the LOADING LOCK LEVER, and LOADING LOCK SPRING, as shown in Fig. 2-30-1.

(Installation)

1. Attach the LOADING LOCK SPRING shown in Fig. 2-30-2 to the LOADING LOCK LEVER.
2. Move the Part A of the LOADING LOCK SPRING, shown in Fig. 2-30-2, in the direction shown by arrow Ⓑ. Hook the Part A of the LOADING LOCK SPRING on the Catch of the Part B of the LOADING LOCK LEVER.
3. Install the LOADING LOCK LEVER with the LOADING LOCK SPRING attached, shown in Fig. 2-30-1, on the MAIN PLATE ASSY.
4. Insert the Part A of the LOADING LOCK SPRING, shown in Fig. 2-30-1, into the Hole of the LOADING LOCK SPRING.

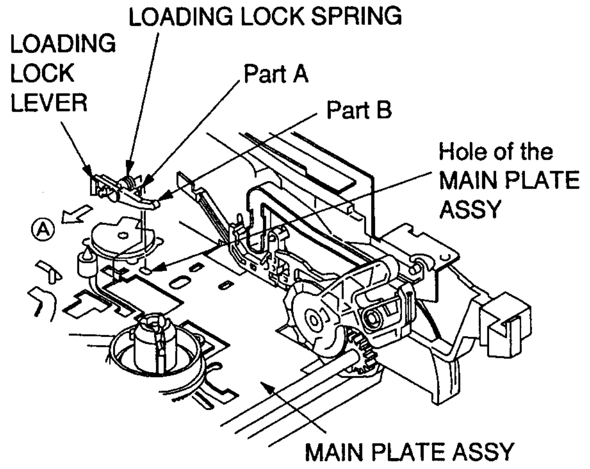

LOADING LOCK SPRING
LOADING LOCK LEVER
Part A
Part B
Hole of the MAIN PLATE ASSY
Ⓐ
MAIN PLATE ASSY

Fig. 2-30-1

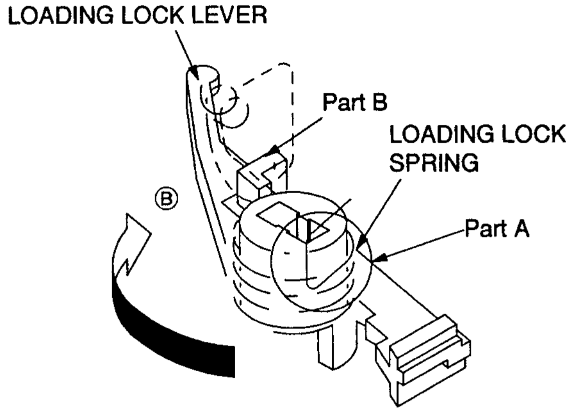

LOADING LOCK LEVER
Part B
LOADING LOCK SPRING
Ⓑ
Part A

Fig. 2-30-2

2-31.CAPSTAN MOTOR

SET POSITION : Normal

To access the CAPSTAN MOTOR, remove the REEL BELT (Para. 2-15) :

(Removal)

1. Remove the three CAPSTAN MOTOR fastening screws (ⓐ) shown in Fig. 2-31-1, and remove the CAPSTAN MOTOR.

(Installation)

1. Set the CAPSTAN MOTOR in the position shown in Fig. 2-31-2 to install it.

Note : Do not damage the shaft of the CAPSTAN MOTOR during installation.

2. Install three screws (ⓐ) shown in Fig. 2-31-1.

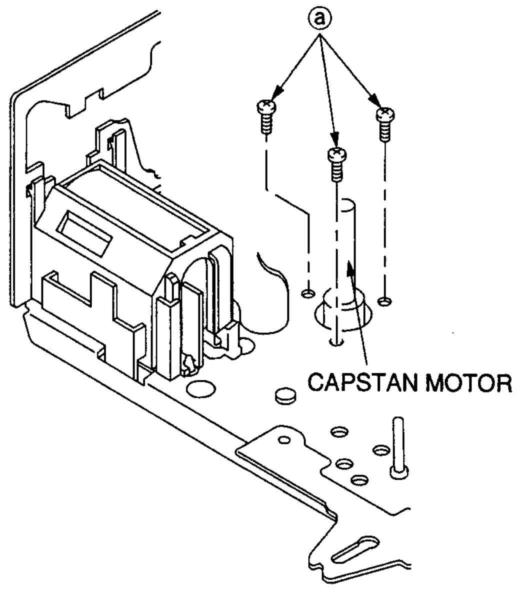


Fig. 2-31-1

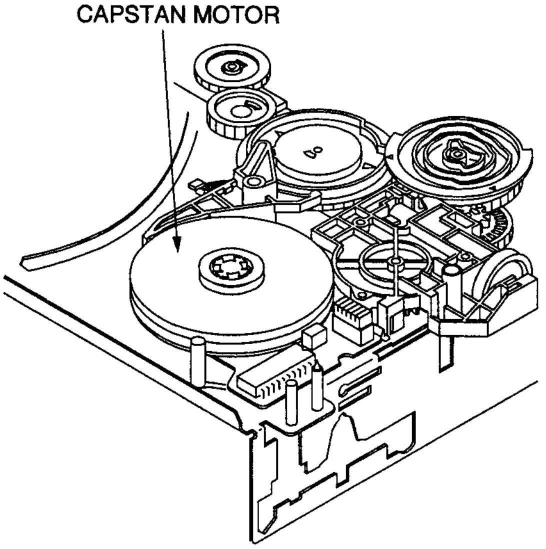


Fig. 2-31-2

2-32. CAM GEAR (SP)

SET POSITION : Upside down

To access the CAM GEAR(SP), remove the following parts :

- CONTROL WIND LEVER (Para. 2-18)
- TENSION LEVER UNIT (Para. 2-18)
- PLATE LD (Para. 2-20)
- LOADING GEAR (Para. 2-20)

(Removal)

1. Use tweezers to unfasten Catch (ⓐ) on the surface of the CAM GEAR (SP), shown in Fig. 2-32-1, and remove the CAM GEAR (SP).

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-32-2 on the new CAM GEAR (SP).
2. Set the CAM GEAR (TU), shown in Fig. 2-32-3 so that the Δ mark on the Part B points to the centre of the LAMP LOADING GEAR.
3. Set the CAM GEAR (SP), shown in Fig. 2-32-3 so that the Δ mark on the Part A points to the centre of the boss for the LOADING GEAR.

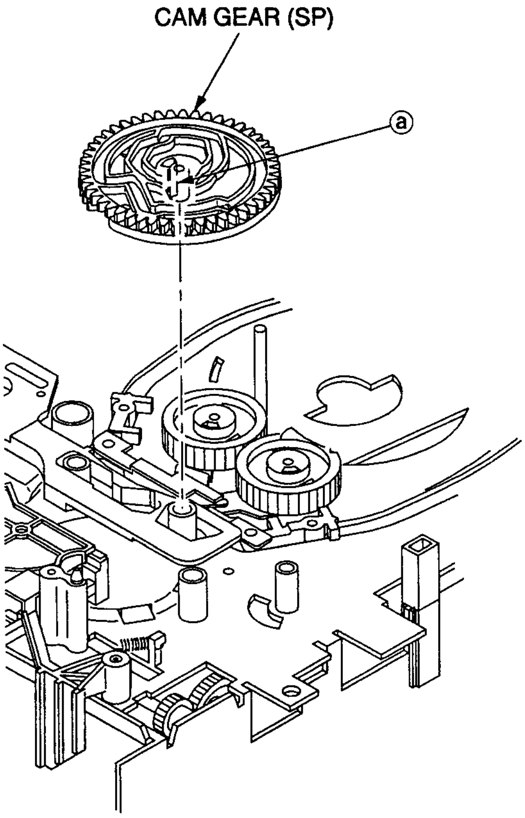
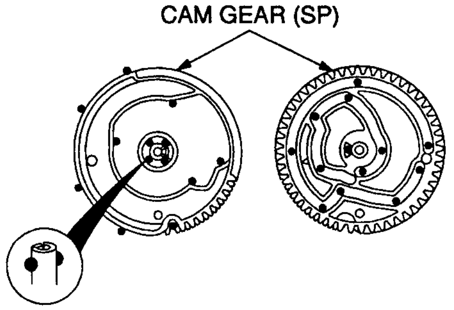


Fig. 2-32-1



Apply GREASE (MULTEMP SH-A) to the area ● .

Fig. 2-32-2

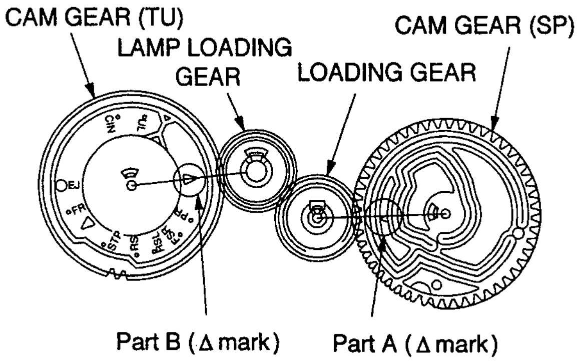

CAM GEAR (TU)
LAMP LOADING GEAR
LOADING GEAR
CAM GEAR (SP)
Part B (Δ mark)
Part A (Δ mark)

Fig. 2-32-3

2-33. LOADING ARM UNIT (TU), LOADING ARM UNIT (SP)

SET POSITION : Upside down

To access the LOADING ARM UNIT(TU) and LOADING ARM UNIT(SP), remove the following parts :

- CONTROL WIND LEVER (Para. 2-18)
- TENSION LEVER UNIT (Para. 2-18)
- PLATE LD (Para. 2-20)
- LOADING GEAR (Para. 2-20)
- CAM GEAR (SP) (Para. 2-32)

(Removal)

1. Remove the two MAIN PLATE SUPPORT fastening screws (ⓐ), shown in Fig. 2-33-1, and remove the MAIN PLATE SUPPORT.
2. Move the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU), shown in Fig. 2-33-1, to the fully loading position.
3. Use tweezers to unfasten Catch (ⓑ) on the surface of the LOADING ARM UNIT (TU) shown in Fig. 2-33-1 and remove the LOADING ARM UNIT (TU).
4. Use tweezers to unfasten Catch (ⓒ) on the surface of the LOADING ARM UNIT (SP), shown in Fig. 2-33-1, and remove the LOADING ARM UNIT (SP).

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-33-2 on the new LOADING ARM UNIT (SP).
2. Install the LOADING ARM UNIT (SP) shown in Fig. 2-33-1.
3. Apply GREASE (MULTEMP SH-A) [859D055O80] to the area specified in Fig. 2-33-2 on the new LOADING ARM UNIT (TU).

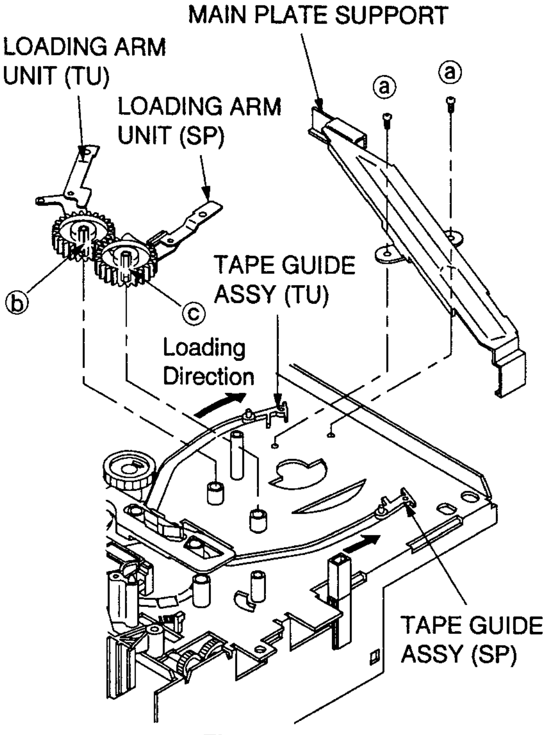
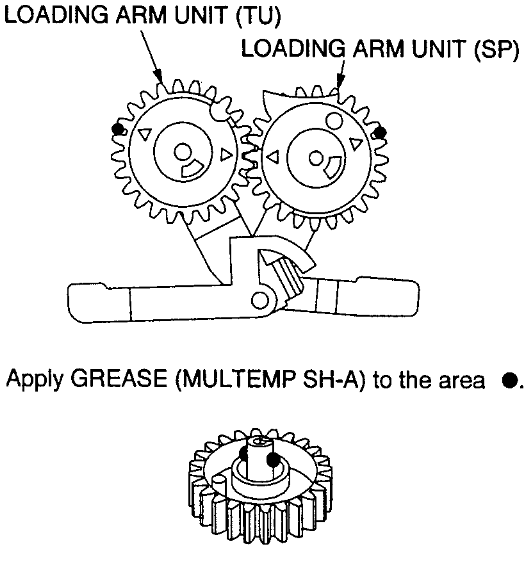

MAIN PLATE SUPPORT
LOADING ARM UNIT (TU)
LOADING ARM UNIT (SP)
ⓐ
ⓐ
ⓑ
ⓒ
TAPE GUIDE ASSY (TU)
Loading Direction
TAPE GUIDE ASSY (SP)

Fig. 2-33-1


LOADING ARM UNIT (TU)
LOADING ARM UNIT (SP)

Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-33-2

4. Set the LOADING ARM UNIT (TU) shown in Fig. 2-33-3 so that the Δ mark of it matches with the Δ mark of the LOADING ARM UNIT (SP) and install it.
5. Move the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU), shown in Fig. 2-33-1 fully to the unloading position.
6. Install the MAIN PLATE SUPPORT shown Fig. 2-33-1.

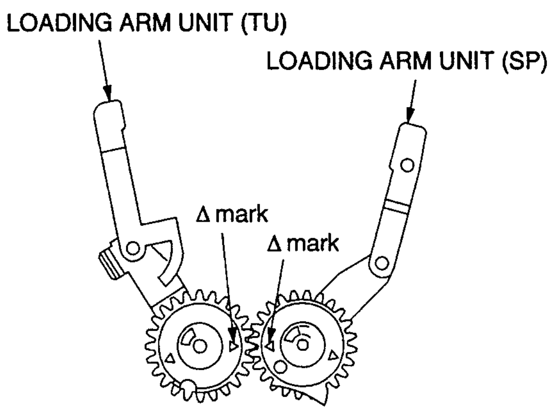


Fig. 2-33-3

2-34. CAM SPRING (C), CAM PLATE UNIT (C)

SET POSITION : Upside down

To access the CAM SPRING(C) and CAM PLATE UNIT(C), remove the following parts :

- LAMP GUIDE (Para. 2-7)
- LOADING BELT (Para. 2-11)
- REEL BELT (Para. 2-15)
- CAPSTAN BRAKE SPRING (Para. 2-16)
- CAPSTAN BRAKE UNIT 2 (Para. 2-16)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- WORM PULLEY UNIT (Para. 2-17)
- CONTROL WIND LEVER (Para. 2-18)
- TENSION LEVER UNIT (Para. 2-18)
- LOADING GEAR (Para. 2-20)
- LAMP LOADING GEAR (Para. 2-20)
- CAM GEAR (TU) (Para. 2-21)
- CAM GEAR (SP) (Para. 2-32)

(Removal)

1. Move the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU), shown in Fig. 2-33-1, to the fully loaded position.
2. Remove the CAM SPRING (C) shown in Fig. 2-34-1.
3. Move the CAM PLATE UNIT (C) in the direction shown by arrow Ⓐ and remove it, as shown in Fig. 2-34-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-34-2 on the new CAM PLATE UNIT (C).

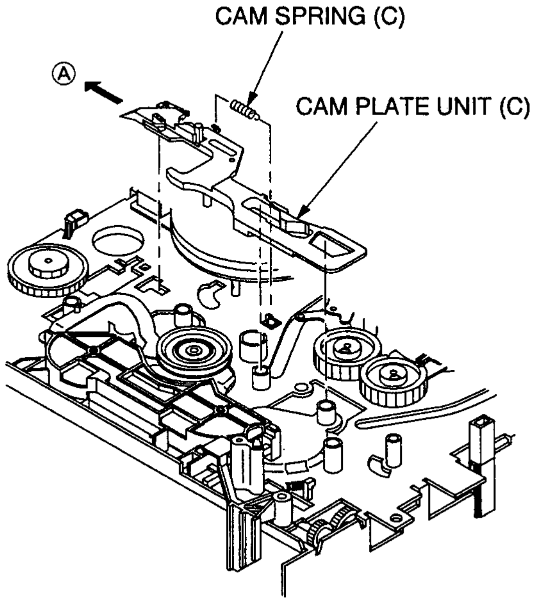
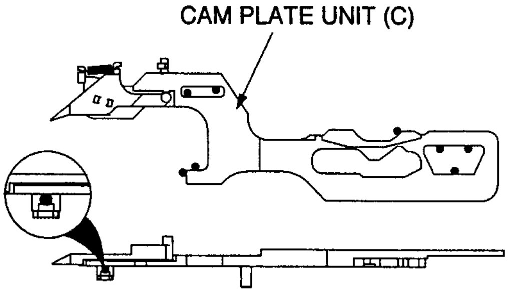


Fig. 2-34-1



Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-34-2

2. Install the CAM PLATE UNIT (C), shown in Fig. 2-34-3, so that the pin (ⓐ) of it enters the Part A of the SHIFT LEVER.
3. Install the CAM SPRING (C) shown in Fig. 2-34-1.
4. Move the TENSION ARM, shown in Fig. 2-34-4 fully in the direction shown by arrow. Move the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU), shown in Fig. 2-33-1 to the fully unloaded position.

2-35.TAPE GUIDE ASSY (SP), TAPE GUIDE ASSY (TU)

SET POSITION : Upside down

To access the TAPE GUIDE ASSY (SP), remove the following parts :

- LAMP GUIDE (Para. 2-7)
- LOADING BELT (Para. 2-11)
- REEL BELT (Para. 2-15)
- CAPSTAN BRAKE SPRING (Para. 2-16)
- CAPSTAN BRAKE UNIT 2 (Para. 2-16)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- WORM PULLEY UNIT (Para. 2-17)
- CONTROL WIND LEVER (Para. 2-18)
- TENSION LEVER UNIT (Para. 2-18)
- LOADING GEAR (Para. 2-20)
- LAMP LOADING GEAR (Para. 2-20)
- CAM GEAR (TU) (Para. 2-21)
- CAM GEAR (SP) (Para. 2-32)
- LOADING ARM UNIT (TU) (Para. 2-33)
- LOADING ARM UNIT (SP) (Para. 2-33)
- CAM SPRING (C) (Para. 2-33)
- CAM PLATE UNIT (C) (Para. 2-34)

(Removal)

1. Move the TAPE GUIDE ASSY (SP), shown in Fig. 2-35-1, to the fully unloading position to remove it.
2. Move the TAPE GUIDE ASSY (TU), shown in Fig. 2-35-1, to the fully unloaded position to remove it.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area specified in Fig. 2-35-2 on the MAIN PLATE ASSY .
2. Install the TAPE GUIDE ASSY (TU) shown in Fig. 2-35-1.
3. Install the TAPE GUIDE ASSY (SP) shown in Fig. 2-35-1.
4. Perform interchangeabilty adjustment, item 3-2-1 (GUIDE ROLLER Adjustment) to item 3-2-5 (Adjustment of FM waveform Flatness).

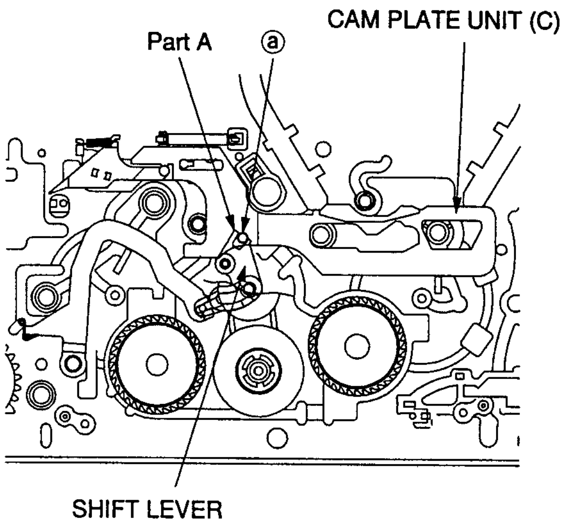


Fig. 2-34-3

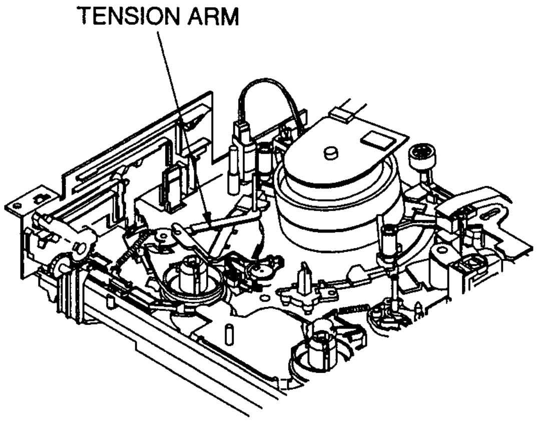


Fig. 2-34-4

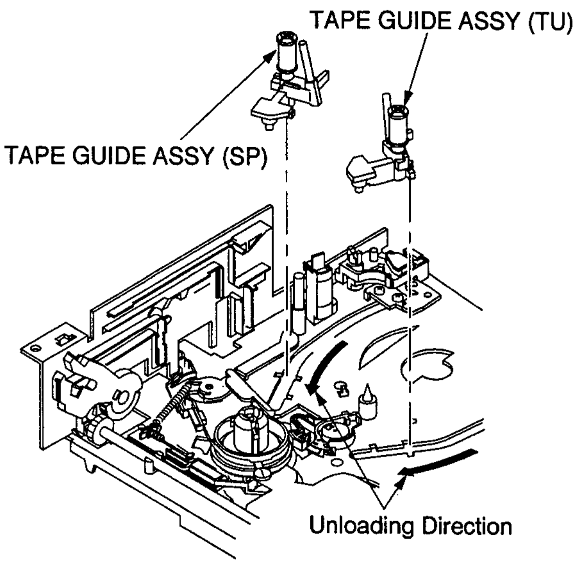
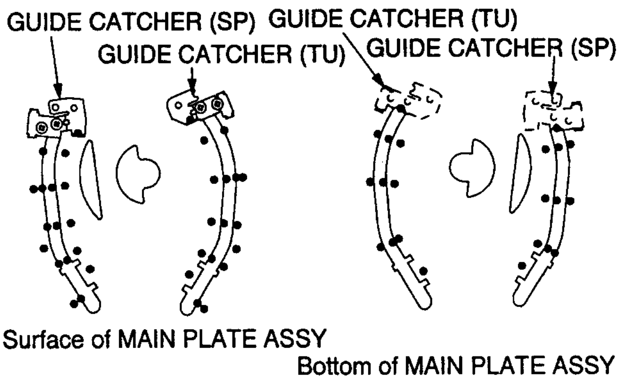


Fig. 2-35-1


GUIDE CATCHER (SP)
GUIDE CATCHER (TU)
GUIDE CATCHER (TU)
GUIDE CATCHER (SP)
Surface of MAIN PLATE ASSY
Bottom of MAIN PLATE ASSY

Apply GREASE (MULTEMP SH-A) to the area ●.

Fig. 2-35-2

2-36. GUIDE ROLLER (SP), GUIDE ROLLER (TU)

(Removal)

1. Loosen the GUIDE ROLLER (SP) set screw (ⓐ) with an L SHAPED BOX DRIVER (859C433070) so that the GUIDE ROLLER (SP), shown in Fig. 2-36-1. Rotates freely.
2. Use the height adjustment screw driver to turn the GUIDE ROLLER (SP) height adjustment screw (ⓑ) counter-clockwise, and remove the GUIDE ROLLER (SP), refer to Fig. 2-36-1.
3. Loosen the GUIDE ROLLER (TU) set screw (ⓒ) with an L SHAPED BOX DRIVER (859C443070) so that the GUIDE ROLLER (TU) shown in Fig. 2-36-1. Rotates freely.
4. Turn the height adjustment screw (ⓓ), at the top of the GUIDE ROLLER (TU), counter-clockwise with a height Adjustment Driver to remove the GUIDE ROLLER (TU), refer to Fig. 2-36-1.

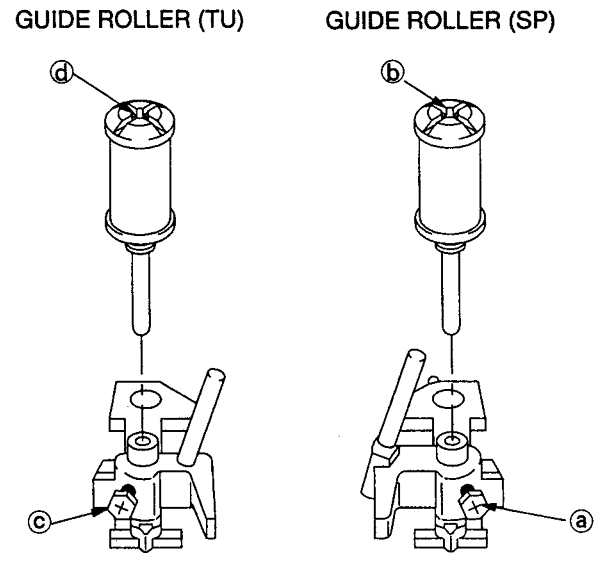

GUIDE ROLLER (TU)
GUIDE ROLLER (SP)
ⓓ
ⓑ
ⓒ
ⓐ

Fig. 2-36-1

(Installation)

1. Insert the GUIDE ROLLER (TU) shown in Fig. 2-36-1 into the installation hole on the TAPE GUIDE ASSY (TU).
2. Turn the height adjustment screw (ⓓ) clockwise shown in Fig. 2-36-2, so that the GUIDE ROLLER (TU) is at a height of 25.2 mm above the Reference Plane.
3. Lightly tighted the GUIDE ROLLER (TU) set screw (ⓒ), shown in Fig. 2-36-1.
4. Insert the GUIDE ROLLER (SP), shown in Fig. 2-36-1, into the installation hole on the TAPE GUIDE ASSY (SP).
5. Turn the height adjustment screw (ⓑ) at the top of the GUIDE ROLLER (SP), clockwise shown in Fig. 2-36-2, so that the GUIDE ROLLER (SP) is at a height of 25.1 mm above the Reference Plane.

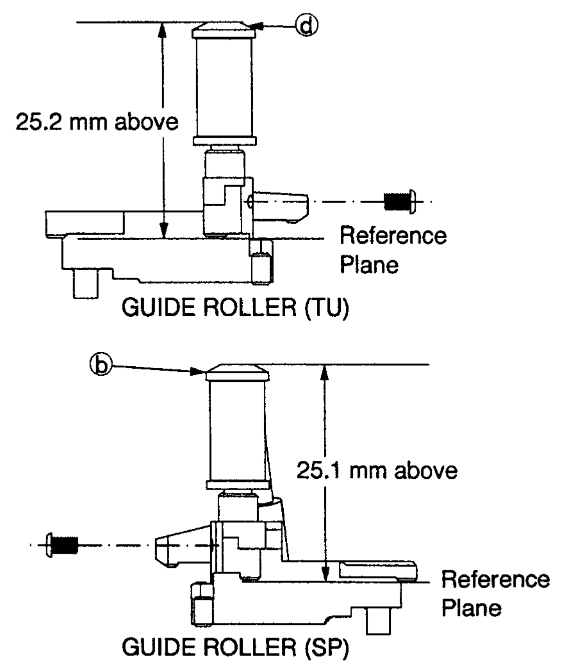

ⓓ
25.2 mm above
Reference Plane
GUIDE ROLLER (TU)
ⓑ
25.1 mm above
Reference Plane
GUIDE ROLLER (SP)

Fig. 2-36-2

6. Lightly tighted the GUIDE ROLLER (SP) set screw (ⓐ) shown in Fig. 2-36-1.
7. Perform "Check and Adjustment of the FM Envelope" in Para. 3-2 of "Interchangeability Adjustment of the Mechanism".
8. Clean the GUIDE ROLLER (SP) and GUIDE ROLLER (TU) with Dry Gauze.

2-37.DRUM CLAMPER, DRUM ASSY

(Removal)

1. Disconnect the Card Lead Wire of the DRUM ASSY shown in Fig. 2-37-1.
2. Remove the two DRUM CLAMPER fastening screws (ⓐ and ⓑ), shown in Fig. 2-37-1, to remove the DRUM ASSY with the DRUM CLAMPER attached.
3. Move the DRUM CLAMPER in the direction shown by arrow to remove it from the DRUM ASSY, as shown in Fig. 2-37-2.
4. If the product is provided with the SHIM, shown in Fig. 2-37-1, remove and scrap it.

(Installation)

Note : When replacing the DRUM ASSY, do not install the shim.

1. Attach the DRUM CLAMPER shown in Fig. 2-37-2 to the DRUM ASSY.
2. Install the DRUM ASSY with the DRUM CLAMPER attached, shown in Fig. 2-37-1, on the MAIN PLATE ASSY.

Note : when installing the DRUM CLAMPER shown in Fig. 2-37-1, first install the screw (ⓑ) and then install the screw (ⓐ).

3. Connect the Card Lead Wire of the DRUM ASSY shown in Fig. 2-37-1.
4. Perform the "Playback Switching Point" adjustment described in ELECTRICAL ADJUSTMENT.
5. Perform "Interchangeability Adjustment of the Mechanism".
6. Clean the DRUM ASSY, shown in Fig. 2-37-1, with alcohol.

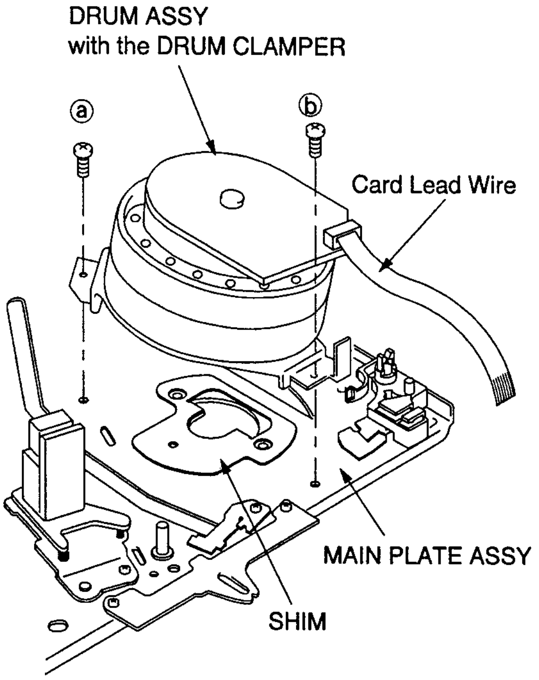

DRUM ASSY
with the DRUM CLAMPER
ⓐ
ⓑ
Card Lead Wire
MAIN PLATE ASSY
SHIM

Fig. 2-37-1

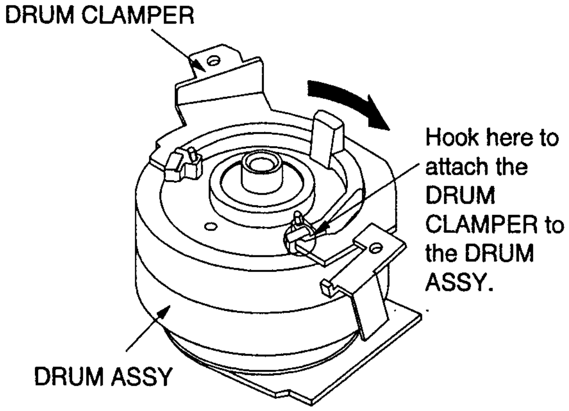

DRUM CLAMPER
Hook here to attach the DRUM CLAMPER to the DRUM ASSY.
DRUM ASSY

Fig. 2-37-2

2-38. DRUM MOTOR STATOR, BRUSH SPRING, ROTOR CASE, END RING, BRUSH, UPPER DRUM ASSY, SPACER

SET POSITION : Normal.

(Removal)

1. Disconnect the Card Lead Wire of the DRUM ASSY shown in Fig. 2-38-1.
2. Remove the two DRUM MOTOR STATOR fastening screws (ⓐ), shown in Fig. 2-38-1, to remove the DRUM MOTOR STATOR.
3. Remove the two ROTOR CASE fastening screws (ⓑ), shown in Fig. 2-38-1, and remove the ROTOR CASE.
4. Loosen the END RING fastening screw (ⓒ) [hexagon screw] shown in Fig. 2-38-1, and remove the END RING.
5. Remove the BRUSH SPRING shown in Fig. 2-38-1.
6. Remove the BRUSH shown in Fig. 2-38-1.
7. Remove the UPPER DRUM ASSY shown in Fig. 2-38-1.
8. Remove the SPACER shown Fig. 2-38-1.

(Installation)

1. Install the SPACER shown in Fig. 2-38-1.

Note : Do not use any other SPACER than the one enclosed with the new UPPER DRUM ASSY for replacement.

2. Install the UPPER DRUM ASSY shown in Fig. 2-38-1.
3. Install the END RING shown in Fig. 2-38-1 so that the reference Hole (Ⓐ) of the END RING is located in parallel with the rear line of the MAIN PLATE ASSY shown in Fig. 2-38-2.
   (Install the reference Hole (Ⓐ) to the right of the rear MAIN PLATE ASSY.)
4. Apply screw sealing agent to the END RING fastening screw (ⓒ) [hexagon screw] shown in Fig. 2-38-1.

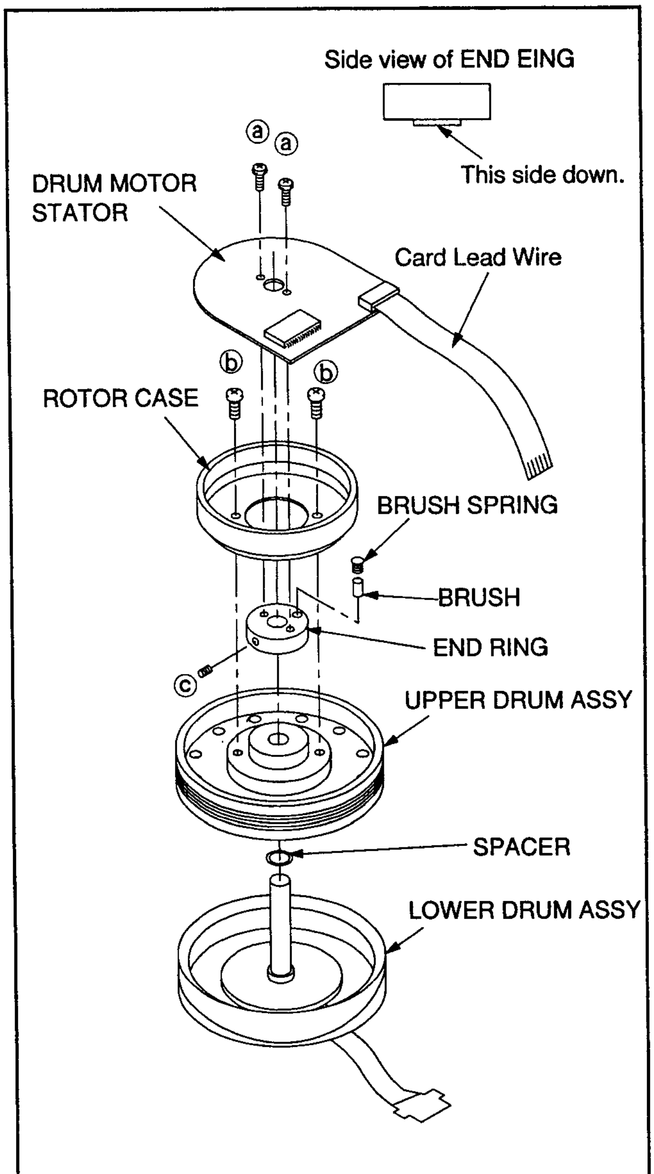

Side view of END EING
This side down.
ⓐ
ⓐ
DRUM MOTOR STATOR
Card Lead Wire
ⓑ
ⓑ
ROTOR CASE
BRUSH SPRING
BRUSH
END RING
ⓒ
UPPER DRUM ASSY
SPACER
LOWER DRUM ASSY

Fig. 2-38-1

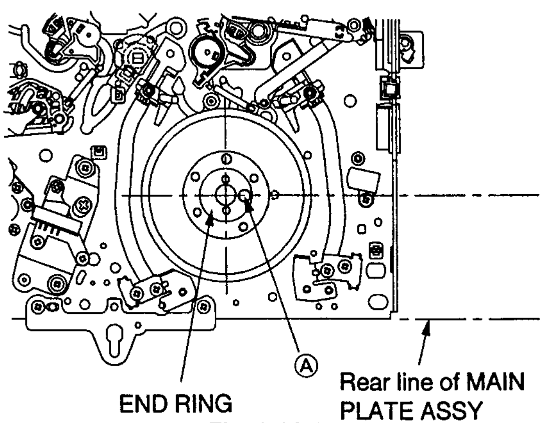

Ⓐ
Rear line of MAIN PLATE ASSY
END RING

Fig. 2-38-2

5. Install the ROTOR CASE shown in Fig. 2-38-1 so that the reference Holes (Ⓐ) match each other at three points between the ROTOR CASE shown in Fig. 2-38-3 and the UPPER DRUM ASSY.
6. Install the BRUSH shown in Fig. 2-38-1.
7. Install the BRUSH SPRING shown in Fig. 2-38-1.
8. Install the DRUM MOTOR STATOR shown in Fig. 2-38-1.
9. Connect the Card Lead Wire of the DRUM ASSY shown in Fig. 2-38-1.
10. Perform the "Playback Switching Point" adjustment described in ELECTRICAL ADJUSTMENT.
11. Perform "Interchangeability Adjustment of the Mechanism".
12. Clean the DRUM ASSY with alcohol.

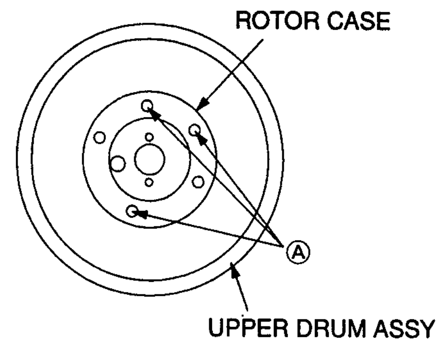


Fig. 2-38-3

2-39. SHIFT LEVER

SET POSITION : Normal

To access the SHIFT LEVER , remove the following parts :

- LAMP GUIDE (Para. 2-7)
- LOADING BELT (Para. 2-11)
- REEL BELT (Para. 2-15)
- CAPSTAN BRAKE SPRING (Para. 2-16)
- CAPSTAN BRAKE UNIT 2 (Para. 2-16)
- BELT PULLEY (Para. 2-15)
- SHIFT SPRING (Para. 2-15)
- MODE HOLDER (Para. 2-17)
- REEL LOCK LEVER (Para. 2-17)
- MODE GEAR (Para. 2-17)
- WORM PULLEY UNIT (Para. 2-17)
- CONTROL WIND LEVER (Para. 2-18)
- TENSION LEVER UNIT (Para. 2-18)
- LOADING GEAR (Para. 2-20)
- LAMP LOADING GEAR (Para. 2-20)
- CAM GEAR (TU) (Para. 2-21)
- PHOTO UNIT (Para. 2-22)
- IDLER CENTER LEVER (Para. 2-23)
- PULLEY GEAR (Para. 2-24)
- IDLER UNIT (Para. 2-24)
- CAM GEAR (SP) (Para. 2-32)
- CAM SPRING (C) (Para. 2-34)
- CAM PLATE UNIT (C) (Para. 2-34)

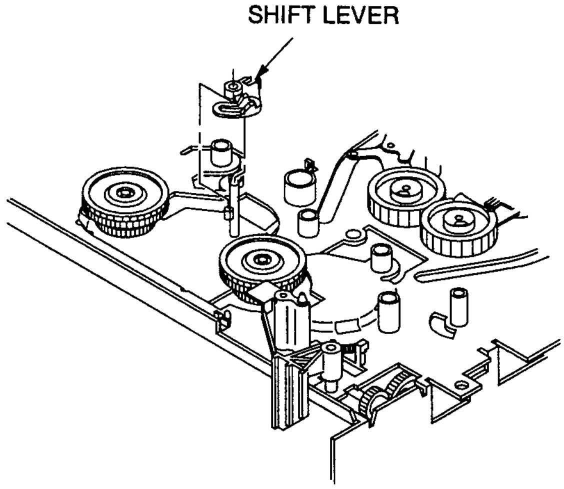


Fig. 2-39-1

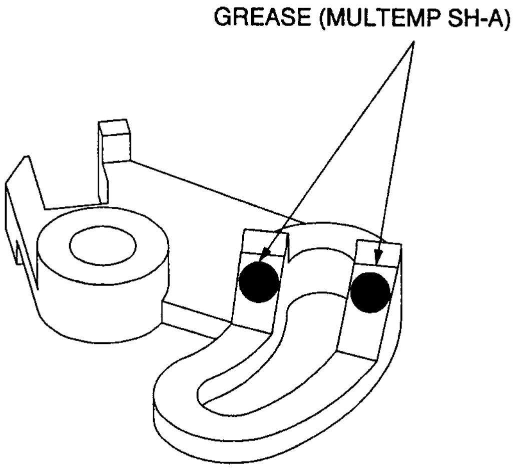


Fig. 2-39-2

(Removal)

1. Remove the SHIFT LEVER shown in Fig. 2-39-1.

(Installation)

1. Apply GREASE (MULTEMP SH-A) [859D055080] to the area of the new SHIFT LEVER shown in Fig. 2-39-2.
2. Install the SHIFT LEVER shown in Fig. 2-39-1.

3. Interchangeability Adjustment of the Mechanism

Note 1 : Tracking may need to be preset during interchangeability adjustment of the mechanism. Digital tracking is preset by short circuiting TP5A and TP5B on the PCB-MAIN.

Note 2 : The adjustments are performed in the play back mode, using the staircase signal of an Alignment Tape. Connect an oscilloscope to TP2A and external Trigger from TP2H, unless otherwise specified.

3-1. Adjustment of BACK TENSION and TENSION PIN Position

Run a Blank Tape for several minutes to break in the REEL DISKs and the transport before making the adjustment.

1. Play back an Alignment Tape. (3H mode) [PM6KH3 : 859C339030]
2. Make sure that the TENSION PIN is in the position shown in Fig. 3-1.
3. If the TENSION PIN is not in the position specified in Fig. 3-1, turn the boss to set the TENSION PIN to be in position.
4. Insert the Back Tension MEASURING JIG (859C345080) and set the VCR to the play back mode.
5. Make sure that the reading of the BACK TENSION MEASURING JIG is within 50 ± 6 g/cm.

Note : Before the measurement, make sure that the Tape travel has become steady.
If the reading exceeds the specified value, replace the TENSION SPRING.

6. While Tape travel is steady, check visually to make sure that the vibration range of the TENSION PIN is 1 mm or less.
If the vibration range exceeds the specified value, replace the REEL DISK.

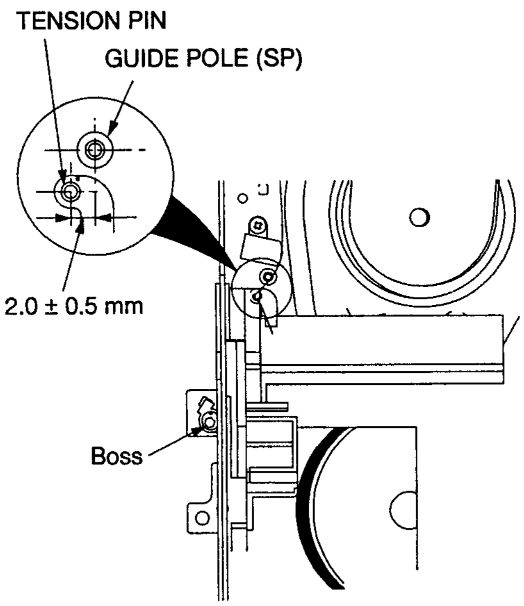


Fig. 3-1

3-2. Check and Adjustment of the FM Envelope

3-2-1. GUIDE ROLLER Adjustment

The Guide Rollers are secured by a hexagon screw, however, this screw, does not require to be loosened for adjustments to be made.

1. Play back an Alignment Tape. (3H mode) [PM6KH3 : 859C339030]
2. Preset tracking.
3. Make sure that the FM waveform is flat like (A).
4. Perform "Adjustment of GUIDE ROLLER (SP) Height" in Item 3-2-2 if the leading portion (the entry side of the DRUM) of the FM waveform is like (B) or (C). Perform "Adjustment of GUIDE ROLLER (TU) Height" in Item 3-2-3 if the trailing portion (the exit side of the DRUM) is like (D) or (E).

3-2-2. Adjustment of GUIDE ROLLER (SP) Height

1. Loosen the screw with an L SHAPED BOX DRIVER (859C433070) slightly so that the GUIDE ROLLER (SP) rotates freely.
2. Observe the leading edge (the entry side of the DRUM) of the FM waveform. If it is like (B), the GUIDE ROLLER (SP) may be lower than the specified position, and if it is like (C), the GUIDE ROLLER (SP) may be higher. Turn the adjustment screw at the top of the GUIDE ROLLER (SP) so that the FM waveform becomes flat like (A).
   - Turn the adjusting screw counter-clockwise if the roller is low.
   - Turn the adjusting screw clockwise if the roller is high.
3. Tighten the Screw.
4. Perform "Coarse Adjustment of Phase" in Item 3-2-4.

3-2-3. Adjustment of GUIDE ROLLER (TU) Height

1. Loosen the screw with an L SHAPED BOX DRIVER (859C433070) slightly so that the GUIDE ROLLER (TU) rotates freely.
2. Observe the trailing edge (the exit side of the DRUM) of the FM waveform. If it is like (D), the GUIDE ROLLER (TU) may be lower than the specified position, and if it is like (E), the GUIDE ROLLER (TU) may be higher. Turn the adjustment screw at the top of the GUIDE ROLLER (TU) so that the FM waveform becomes flat like (A).
   - Turn the adjusting counter-clockwise if the roller is low.
   - Turn the adjusting clockwise if the roller is high.
3. Tighten the set Screw with an L SHAPED BOX DRIVER (859C433070).
4. Perform "Coarse Adjustment of Phase" in Item 3-2-4.

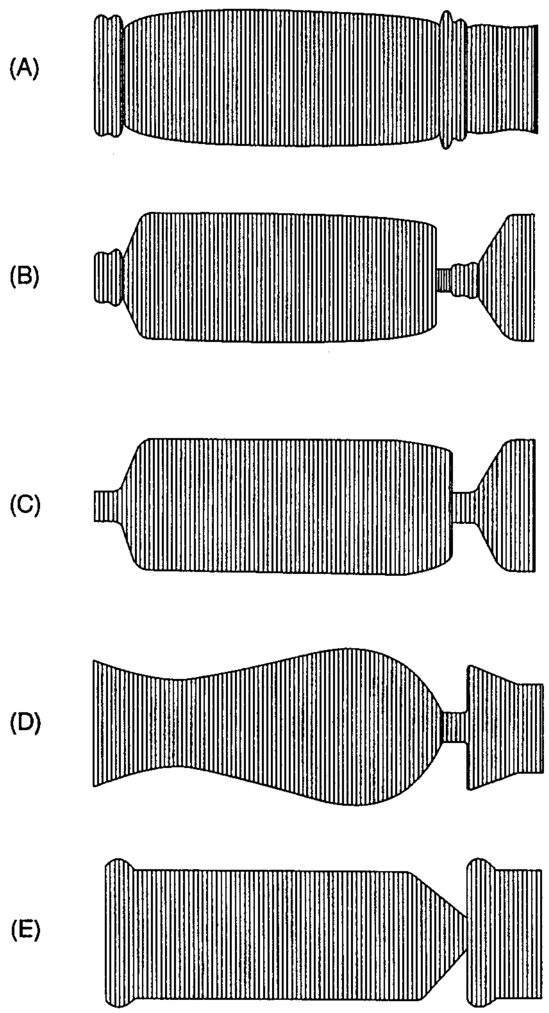


Fig. 3-2-1

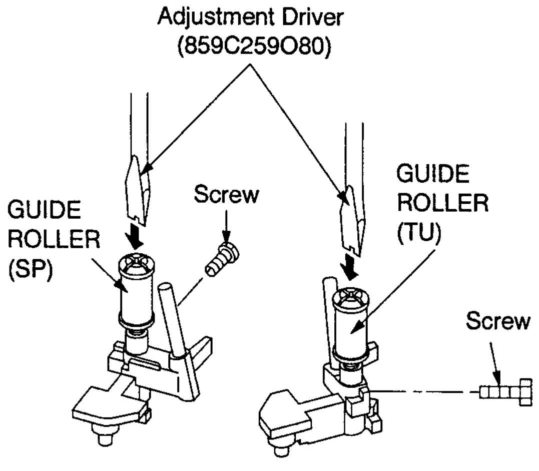


Fig. 3-2-2

3-2-4. Coarse Adjustment of Phase

1. Play back an Alignment Tape. (3H mode)
   [PM6KH3 : 859C339030]
2. Preset tracking. (Refer to Note 1 para 3.)
3. Check the FM waveform after performing "GUIDE ROLLER Adjustment" in Item 3-2-1.
4. If the amplitude of the FM waveform is narrow like (F) because of out of phase, adjust it to the maximum like (G) in Fig. 3-2-4, by the following procedure. Loosen the Screws D and E and insert a screw driver into the Plastic Boss of the MAIN PLATE ASSY. Move the A/C PLATE right and left to adjust the amplitude level of the FM waveform to the maximum. [Waveform G in Fig. 3-2-4]
5. Tighten the Screws D and E.

3-2-5. Check of FM Waveform Flatness

1. Play back an Alignment Tape. (3H mode)
   [PM6KH3 : 859C339030]
2. Change tracking and make sure that the amplitude changes and the FM signal remains flat.

Note : Press the tracing (+)and (–) button during play back to adjust tracking.

3. Adjust the tracking so that the amplitude level of the FM waveform is maximum. Set the oscilloscope so that the amplitude level of the FM waveform is 5 divisions.
4. Adjust tracking so that the peak value of the FM waveform is 4 divisions. Check if the FM waveforms (B), (C), (D) and (E) are within the specified values shown in Fig. 3-2-5.
5. If the waveform is not within the specified value, repeat the procedure in Item 3-2 "Check and Adjustment of the FM Envelope" from the beginning.

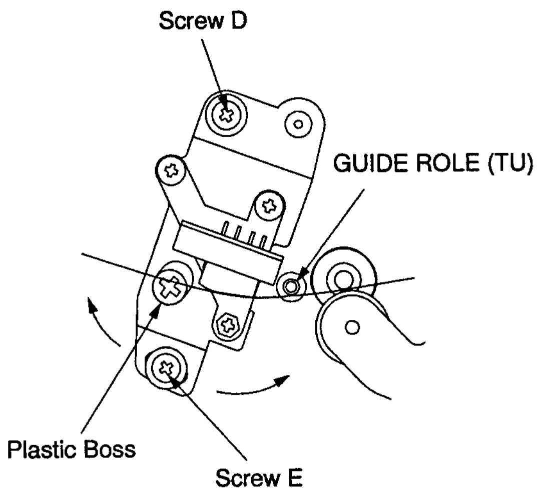


Fig. 3-2-3

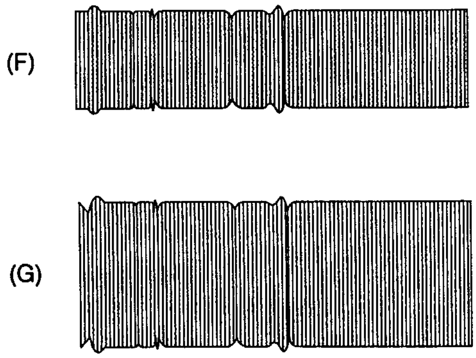
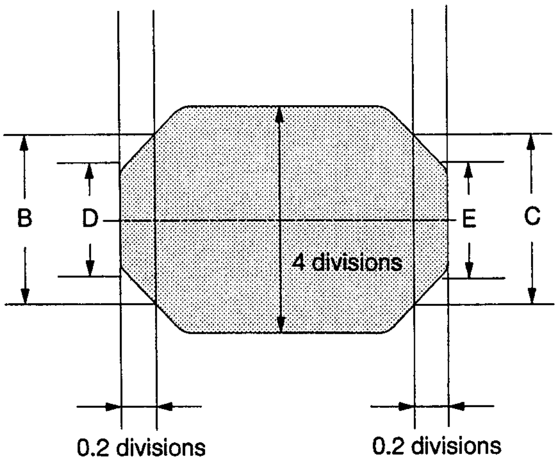


Fig. 3-2-4



B, C	At least 2.8 of the scale
D, E	At least 1.0 of the scale

Fig. 3-2-5

3-2-6. Tape Running Condition at the GUIDE ROLLERs (Check 1)

1. Play back an Alignment Tape. (3H mode)
   [PM6KH3 : 859C339030]
2. Visually check if there is a space between the Tape and the lower flanges of the GUIDE ROLLER (SP) and GUIDE ROLLER (TU).
3. If there is no space, replace the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU) according to Para. 2-35 in "Replacement of Major Parts".
4. Alternately load and unload the Tape several times, check that flatness of the FM waveform does not change.
5. If flatness changes, check the installation condition of the A/C HEAD. If it is abnormally installed, replace the A/C HEAD UNIT according to para. 2-4 and perform "Coarse Adjustment of Phase" in Item 3-2-4 again.

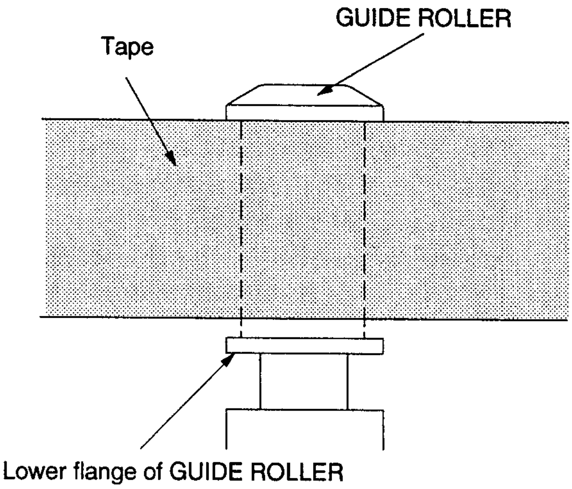


Fig. 3-2-6

3-2-7. Tape Running Condition at the GUIDE ROLLERs (Check 2)

1. Play back an Alignment Tape. (3H mode)
   [PM6KH3 : 859C339030]
2. Lightly press and release the top of the GUIDE ROLLER (SP) and GUIDE ROLLER (TU). Check that the FM waveform is quickly restored to the previous level.
3. If the FM waveform is not restored to the previous level, replace the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU) according to para 2-35 in "Replacement of Major Parts".

3-3. Adjustment of A/C HEAD

3-3-1. Adjustment of A/C HEAD Slant

1. Play back a Blank Tape.
2. Slowly turn adjusting screw C counter-clockwise to slightly crease the bottom of the Tape at the flange portion of GUIDE POLE (TU).
3. Slowly return adjusting screw C to remove the crease.
4. Slowly turn the adjusting screw C counter-clockwise again and stop it just before the Tape is creased.

3-3-2. Adjustment of A/C HEAD Azimuth and Height

1. If the height of the CONTROL HEAD is different from the specified value in Fig. 3-3-2, adjust it with the adjusting screw A.
2. After adjustment with the screw A, perform "Adjustment of A/C HEAD Slant" in Item 3-3-1 again.
3. Connect the oscilloscope to the audio output terminal.
4. Play back an Alignment Tape. (3H mode) [PM6KH3 : 859C339030]
5. Adjust the audio output level to the maximum by turning the Azimuth adjusting screw B shown in Fig. 3-3-1.
   After the adjustment, pull out the screw driver and check if the audio output level is 4.6 divisions or more, where the maximum audio output level is set to 5.
   If the audio output level is less than 4.6, repeat the procedure 1~ 5.
6. Push the A/C HEAD to the right and left (in the direction A and A' in Fig. 3-3-1) and then release it. Check that the audio output level does not change. (Do not push the A/C HEAD such a degree that the audio output level is reduced less than 3/4 of its maximum value.)
7. Check that the change in the audio output level is less than 2 dB.
8. If the change exceeds 2 dB, perform "Adjustment of A/C HEAD Slant" in Item 3-3-1 and this adjustment.
9. If the above procedure proves to be unsatisfactory, replace the TAPE GUIDE ASSY (SP) and TAPE GUIDE ASSY (TU) according to Para. 2-35 (Replacement of Major Parts).

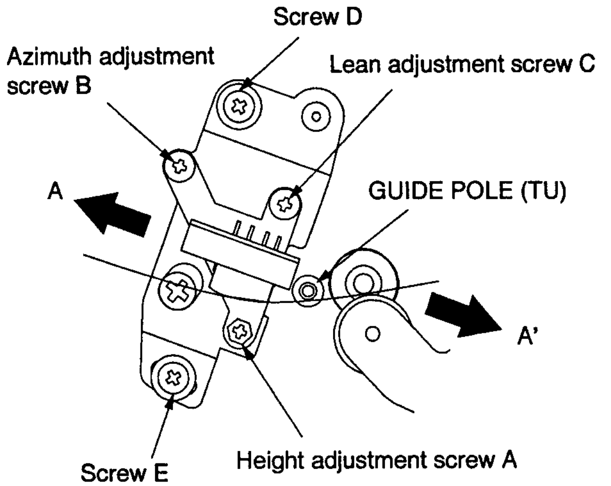

Screw D
Azimuth adjustment screw B
Lean adjustment screw C
A
GUIDE POLE (TU)
A'
Screw E
Height adjustment screw A

Fig. 3-3-1

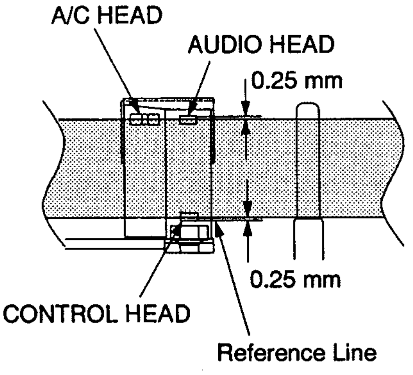

A/C HEAD
AUDIO HEAD
0.25 mm
0.25 mm
CONTROL HEAD
Reference Line

Fig. 3-3-2

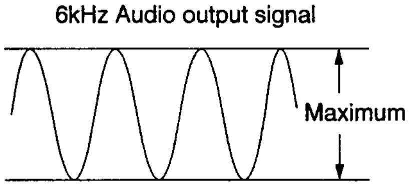

6kHz Audio output signal
Maximum

Fig. 3-3-3

3-4. Adjustment of Phase

1. Set the VCR to the play back mode. (3H mode)
   (Use the Alignment Tape specified below to perform adjustment 1~4).
   [PM6KE2 35 : 859C568O90]
2. Preset tracking.
3. Loosen the Screws D and E and insert a screw driver into the Plastic Boss of the MAIN PLATE ASSY. Move the A/C PLATE right and left to adjust the FM output waveform to the maximum.
4. Tighten the screws D and E.
5. Play back the Alignment Tape. (3H mode)
   [NMX : 859C568O60]
6. Connect TP2A (the FM waveform output) and the audio output terminal, to the oscilloscope. External Trig. from TP2H. Check that the missing portions of the FM waveform, and that of the Audio waveform are as shown in Fig. 3-4-2.
7. If they are not within the specified value, repeat the procedure 3.
8. Adjust manual tracking so the FM waveform is maximum, and set the oscilloscope so that the waveform is "5" divisions. (Refer to Note in para.3-2-5 about tracking adjustment.)
9. Preset tracking.
10. Check that the FM waveform on the oscilloscope is "4.8" or more divisions.
11. If the FM waveform is below "4.8" divisions after tracking preset, repeat this adjustment.
12. Push the A/C HEAD to the right and left (in the direction of A-A' in Fig. 3-4-1) and then release. Check that the amplitude of the FM waveform does not change from that before shifting the A/C HEAD.
13. When the FM waveform Varies in amplitude level, check the mounting position of the A/C HEAD UNIT. If the position is incorrect, correct the position following Item 2-4 "A/C HEAD UNIT" perform Item 3-3 "Adjustment of A/C HEAD" and repeat this adjustment from the beginning.
14. Alternately load and unload the Tape several times, check that the amplitude of the FM waveform does not change.

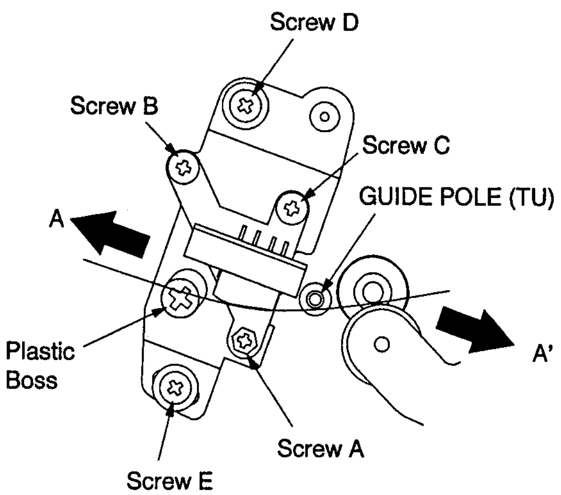


Fig. 3-4-1

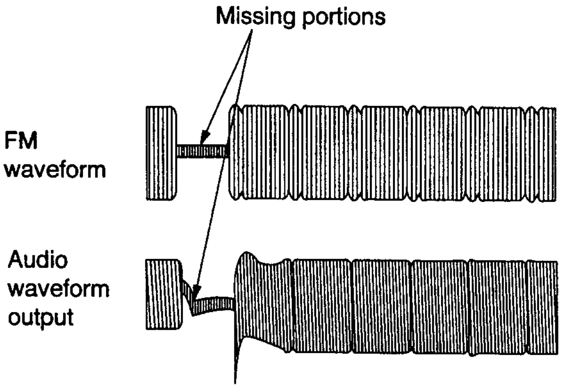


Fig. 3-4-2

3-5. Adjustment of GUIDE ARM ASSY (TU) Height

1. Run a final portion of E-240 Blank Tape in the reverse search mode.
2. Tighten the NYLON NUT of the GUIDE ARM ASSY (TU) with a box driver to lower the GUIDE ARM ASSY (TU) until the Tape is creased at the lower flange of the GUIDE POLE (TU). Then slowly return the NYLON NUT, stop it at the point where the crease is removed. (During adjustment, use an uncovered Cassette Tape, or raise the cover so that the adjustment is available.)

Note : During adjustment, turn the NYLON NUT in the loosening direction. Do not turn the NYLON NUT more than ± 1/2 turn.

3. Eject and insert the Cassette Tape, and then set the VCR to the reverse search mode again. Check that the Tape is not creased at the lower flange of the GUIDE POLE (TU). If the crease is not removed, repeat the procedure 1~ 3.
4. Set the VCR to the play back mode and check that the Tape is not creased at the lower flange of the GUIDE POLE (TU). If the crease is present, repeat "Adjustment of A/C HEAD Slant" in Item 3-3-1 and the succeeding adjustments.
5. Run the start portion of E-180 Blank Tape in the forward search mode and check that the Tape is not creased at the GUIDE POLE (TU).

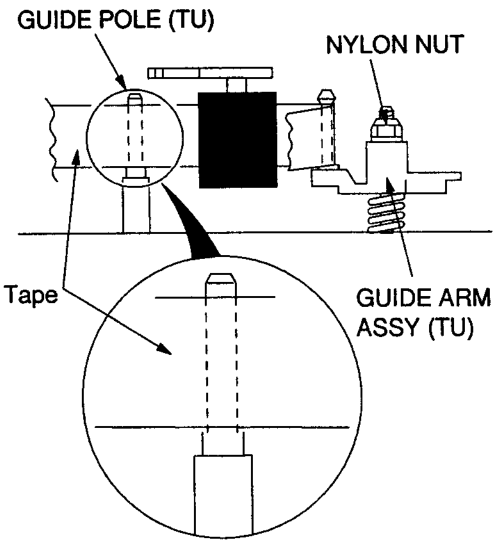


Fig. 3-5

4. Servicing for Tape Jamming during the Loading Process

1. Remove the DECK ASSY.
2. If the Tape is caught in the mechanical parts, remove the Tape.
3. If the TAPE GUIDE ASSY (TU) and TAPE GUIDE ASSY (SP) are in the Tape unlocked position, turn the LOADING MOTOR ASSY shown in Fig. 4 in the direction shown by arrow Ⓐ and move the TAPE GUIDE ASSY (TU) and TAPE GUIDE ASSY (SP) fully in the unloaded position.
4. Turn the CAPSTAN MOTOR shown in Fig. 4 in the direction shown by arrow Ⓑ to wind the Tape up within the Cassette.
5. Turn the LOADING MOTOR ASSY shown in Fig. 4 in the direction shown by arrow Ⓐ to eject the Tape.

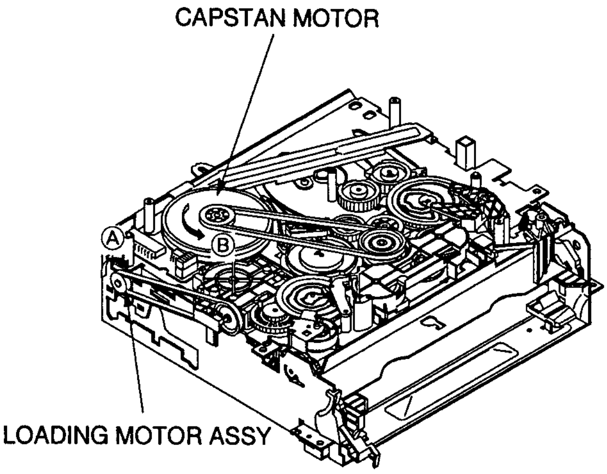


Fig. 4

GLOSSARY OF ABBREVIATIONS

A.E	: Audio Erase
A/C-H	: Audio / Control Head
A-FF	: Audio Flip Flop from Servo Circuit
A-PB	: Audio-Play Back
A-REC	: Audio-Recording
ACC	: Automatic Chroma Control
AFC	: Automatic Frequency Control
AFT	: Automatic Fine Tuning
AGC	: Automatic Gain Control
ALC	: Automatic Level Control
AMP	: Amplifier
ANT	: Antenna
APC	: Automatic Phase Control
ATT	: Attenuator
B/W	: Black and White
BPF	: Band-Pass Filter
BS	: Band Switch
BU	: Back Up
C-LAMP	: Cassette Lamp
C-ROT	: Chroma Rotation
CASS	: Cassette
CE	: Chip Enable
CG	: Character Generator
CK	: Clock
CL	: Clear
CNT	: Counter
CONV	: Converter
CP	: Capstan
CP-F/R	: Capstan-Forward/Reverse
CP-FG	: Capstan-Frequency Generator
CP-M	: Capstan-Motor
CP-OUT	: Capstan Motor Control Out
CS	: Cassette Switch or Chip Select
CTL	: Control
D-FF	: Drum Flip Flop from Servo Circuit
D-M	: Drum Motor
D-OUT	: Drum Motor Control Out
DEMOD	: Demodulator
DET	: Detector
DL	: Delay Line
DOC	: Drop Out Compensator
DOP	: Drop Out Pulse
DTR	: Digital Tracking
EE	: Electronic-Electronic
EF	: Emitter Follower
EMPHA	: Emphasis
EP	: Extended Play
EQ	: Equalizer
ES	: End Sensor
F/R	: Forward/Reverse
F/R-SW	: FF/Rewind Switch
FE-H	: Full Erase Head
FF	: Fast Forward
FG	: Frequency Generator
FL-SW	: Front Loading Switch
FLCONT	: Flying Erase Head Control
FLM	: Front Loading Motor
FM	: Frequency Modulator
FS	: Forward Search
G	: Ground
H-LED	: Humidity-LED
H-SENS	: Humidity-Sensor
H-SYNC	: Horizontal Synchronising Signal
HA	: Head Amplifier
HE	: Hall Element
HP	: Head Phone
HPF	: High-Pass Filter
LED	: Light Emitting Diode
LIM	: Limitter
LM	: Loading Motor
LP	: Long Play
LPF	: Low-Pass Filter
MC	: Mechanical Control
MDA	: Motor Drive Amplifier
MIC	: Microphone
MM	: Mono-Multivibrator
MOD	: Modulator
$\overline{N}$	: Not Normal
NL DEEMP	: Non Linear Deemphasis
NR	: Non Regulated or Noise Reduction
O-PWV	: ON/OFF Command to supply B + Power
OPE	: Operation
OSC	: Oscillator
OTR	: One Touch Recording
P/R	: Playback/Record
P/R-SW	: Playback/Record-Switch
PB	: Play Back
PCB	: Printed Circuit Board
PG	: Pulse Generator
PIC	: Picture Control
PLL	: Phase Locked Loop
PSC	: Pulse Swallow Control
PWM	: Pulse Width Modulation
PWV	: ON/OFF Command to supply B + Power
REC	: Recording
REC-1, REC-2	: Record Command for the PB/REC Control Circuit
REF	: Reference
REG	: Regulator
REM	: Remaining Time or Remote Control
REW	: Rewind
RIS	: Record Inhibit Switch
RS	: Reverse Search
S/P	: Still/Pause
SENS	: Sensor
SL	: Slow
SP	: Standard Play
SP-SENS	: Supply Reel Sensor
SS	: Start Sensor
STBY	: Stand By
T.P	: Test Point
T-REC	: Timer-Record
TM	: Take up Motor
TR	: Transistor or Tracking
TU-SENS	: Take Up Reel Sensor
UL	: Unload
V-SYNC	: Vertical Synchronising Signal
VCO	: Voltage Controlled Oscillator
VS	: Voltage Synthesizer
VXO	: Variable Crystal Oscillator
W/D	: White/Dark
X'OSC	: Crystal Oscillator
Y/C	: Luminance/Chrominance
YNR	: Y Noise Reduction

CHIP PARTS REPLACEMENT

CHIP PARTS REPLACEMENT

Some resistors, shorting jumpers (0Ω resistor), ceramic capacitors, transistors and diodes are chip parts.
When replacing these parts, note the following cautions.

Cautions :

A. Use fine tipped, well insulated soldering pencil (iron), about 30 watts, and tweezers.
B. Melt the solder and remove the Chip Parts carefully not to tear off the copper foil of the printed circuit board.
C. Discard removed chips ; do not reuse them.
D. Do not apply heat for more than 3 seconds to new Chip Parts.
E. Avoid using a rubbing stroke when soldering.
F. Take care not to scratch, or damage the Chip Parts when soldering.
G. Supplementary cementing is not required.

1. Removal of Chip Parts (Resistors, capacitors, etc.)

A. Grasp the part with tweezers. Melt the solder at both sides alternately, remove one side of the part with a twisting motion.
B. Melt the solder at the other side and remove the part.

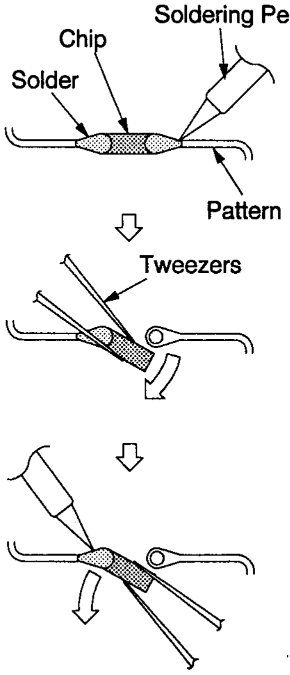

Soldering Pencil
Chip
Solder
Pattern
Tweezers

Fig. 1

2. Removal of Chip Parts (Transistors)

A. Melt the solder of one lead. Lift the side of that lead upward.
B. Simultaneously melt the solder of the two remaining leads and lift the part from the PCB.

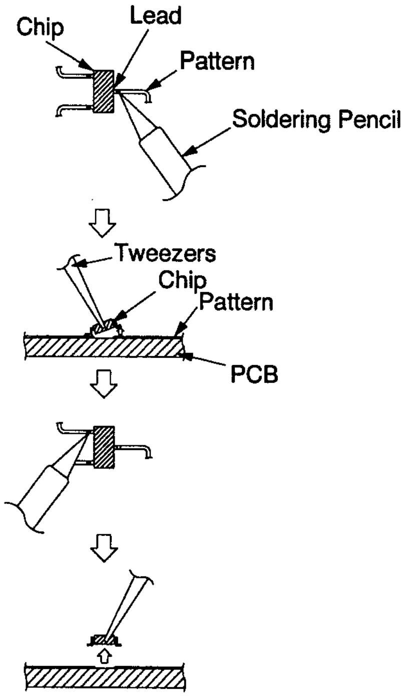

Chip
Lead
Pattern
Soldering Pencil
Tweezers
Chip
Pattern
PCB

Fig. 2

3. Replacement

A. Presolder the contact points of the circuit pattern.
B. Press the part downward with tweezers and apply the soldering pencil as shown in Fig. 3.

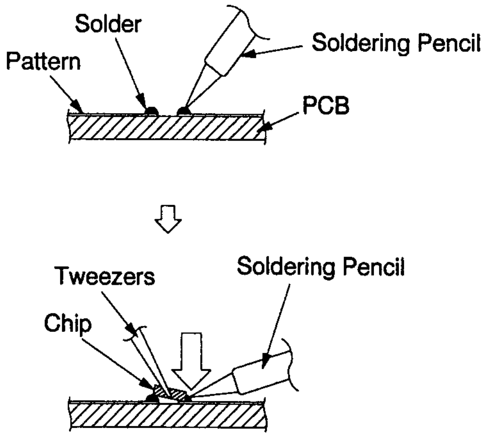
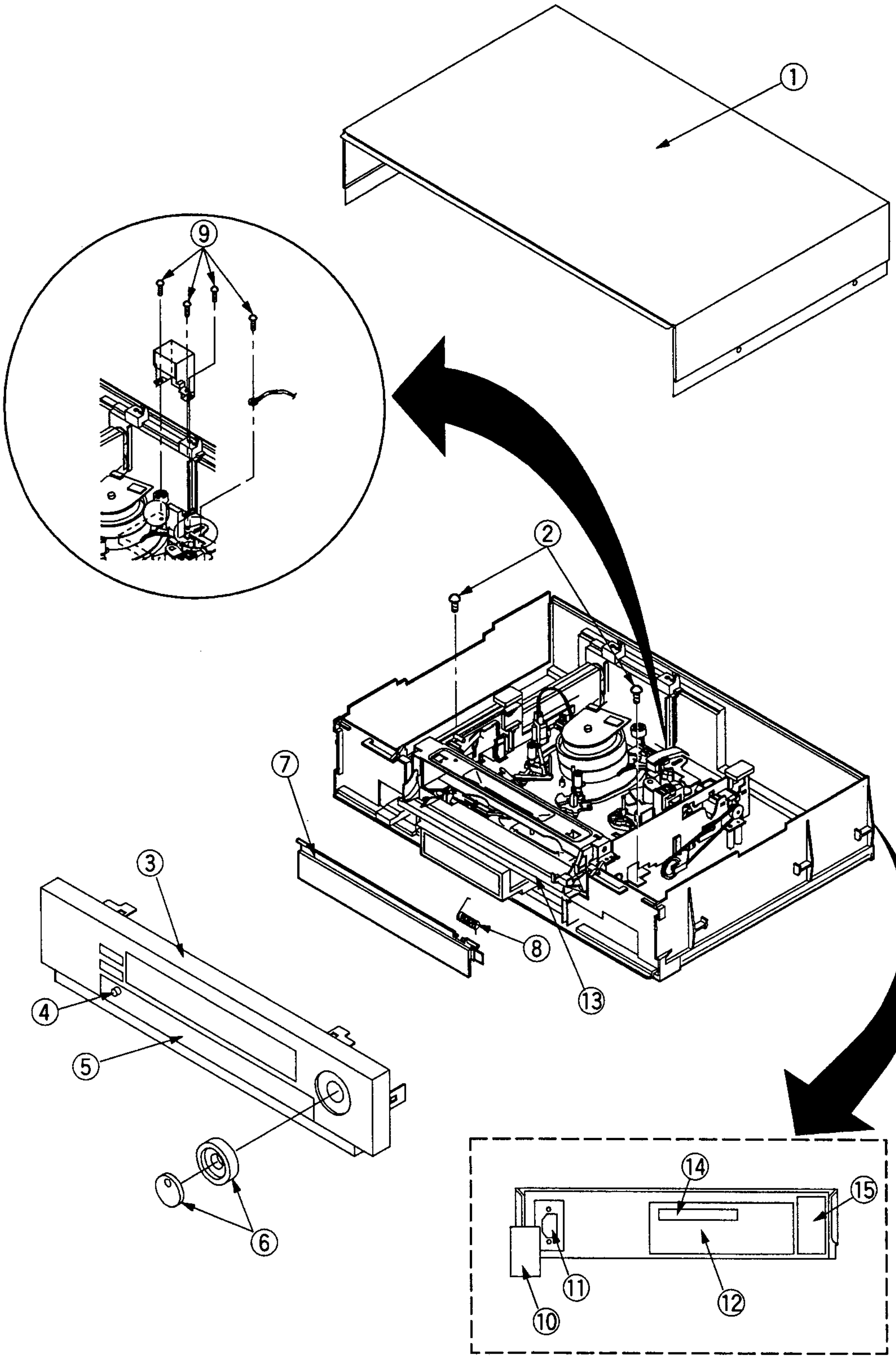

Solder
Pattern
Soldering Pencil
PCB
Tweezers
Soldering Pencil
Chip

Fig. 3

[MEMO]

PARTS LIST

1. CABINET ASSEMBLY


①
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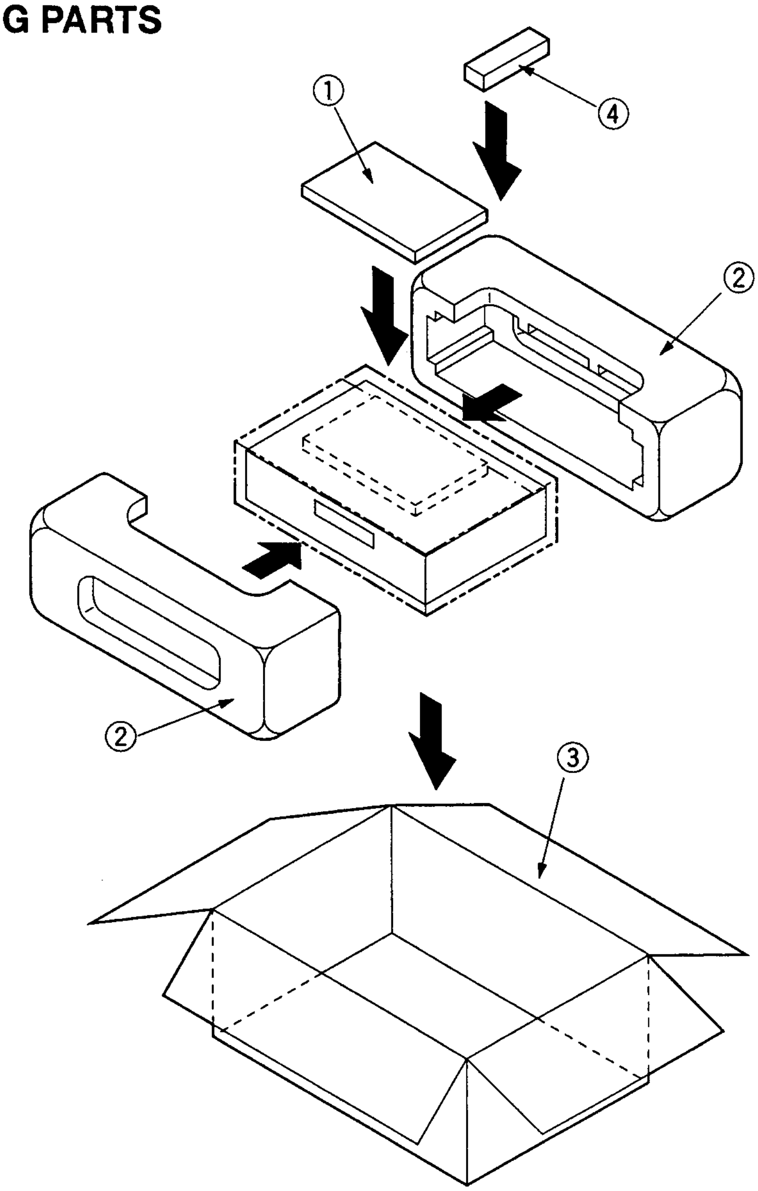
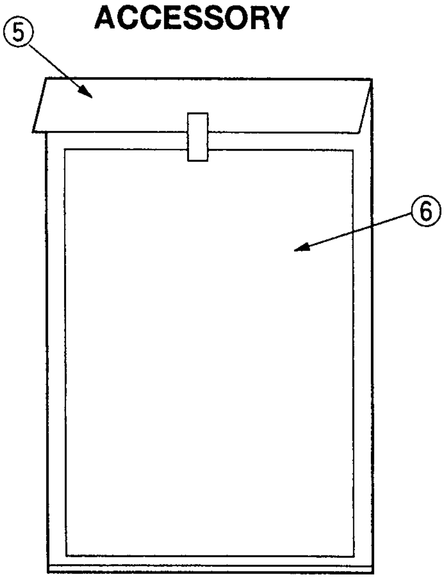
⑩

ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
CABINET ASSEMBLY			
1	968C047O01	TOP COVER ASSY	
2	669D221O40	SCREW	4 × 12 46LA005
3	968B044O10	FRONT ASSY	
4	734C035O10	CONTROL KNOB	
5	752C224O20	TIMER PLATE	
6	705D038O60	JOG/SHUTTLE ASSY	
7	752C222O70	CASSETTE DOOR ASSY	
8	572D385O10	F/L SPRING	
9	669D229O90	SCREW	M3.0 × 4 46LA005
10	761B313O10	INLET COVER	
11	451C210O10	POWER JACK	
12	761B312O20	TERMINAL COVER	
13	641D806O10	INSERT GUIDE	
14	440B128O10	TERMINAL BOARD	
15	760D608O10	CONTROL PLATE	

2. PACKING PARTS



ACCESSORY



ITEM NO.	PARTS NO.	PARTS NAME	DESCRIPTION
		PACKING PARTS	
1	--------	ACCESSORY	
2	803A480010	CUSHION	
3	802B602020	PACKING CASE	
4	246C098010	AC POWER CORD	[HS-7300E]
4	246C221010	AC POWER CORD	[HS-7300E(B)]
		ACCESSORY	
5	831D302010	PACKING BAG	(FOR ACCESSORY) 375X250 0.06T
6	872C190010	INSTRUCTION BOOK	[HS-7300E]
6	872C191070	INSTRUCTION BOOK	[HS-7300E(B)]

3. ELECTRICAL PARTS

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
	INTEGRATED CIRCUITS		
IC201	270P080010	IC	AN3341SC
IC2A0	270P195010	IC	LA7346
IC2A1	270P247010	IC	LC89970M
IC2001	275P084010	MOS IC	μPD6458GT-101
IC2007	272P635010	IC	AN3916-(LF)
IC300	272P200010	IC	M5201FP
IC3A0	272P234010	IC	LA7295
IC4A0	274P602080	MOS IC	MN67492MTD5
IC4A1	263P053020	MOS IC	TC4053BP
IC4A2	272P235010	IC	TA7291S
IC4A3	272P079010	IC	NJM2902M
IC4A4	263P335010	MOS IC	MC14013BF
IC4A5	263P335010	MOS IC	MC14013BF
IC4A6	272P204010	IC	LM2904M
IC501	274P561010	MOS IC	μPD16311GC-AB6
IC5A0	275P111020	MOS IC	M38185ME-254FP
IC5A1	270P070010	MOS IC	AT93C56-10PC
IC5A2	263P708020	MOS IC	TLC272CPS
IC5A3	263P328010	MOS IC	MC14070BF
IC5A4	270P528010	IC	PST7029MT
IC5A5	263P328010	MOS IC	MC14070BF
IC6000	270P387010	IC	CXA1203M
IC6001	270P384010	IC	AN3592K
IC7A0	272P292010	MOS IC	CXL1009P
IC7A1	272P687010	IC	NJM2234L
IC7A2	272P687010	IC	NJM2234L
IC7A3	274P758010	MOS IC	TC7WU04F
IC7A4	274P758010	MOS IC	TC7WU04F
IC7A5	274P758010	MOS IC	TC7WU04F
IC7A6	274P758010	MOS IC	TC7WU04F
IC901	272P500020	IC	HA17431PA
	TRANSISTORS		
Q 201	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 202	260P807010	CHIP TRANSISTOR	UN2212
Q 203	260P807010	CHIP TRANSISTOR	UN2212
Q 204	260P807010	CHIP TRANSISTOR	UN2212
Q 206	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 207	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 208	260P807010	CHIP TRANSISTOR	UN2212
Q 209	260P255040	TRANSISTOR	2SA950-Y
Q 210	260P807010	CHIP TRANSISTOR	UN2212
Q 211	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 212	260P255040	TRANSISTOR	2SA950-Y
Q 213	260P807010	CHIP TRANSISTOR	UN2212
Q 2A5	260P806010	CHIP TRANSISTOR	DTA124EK
Q 2A6	260P806010	CHIP TRANSISTOR	DTA124EK
Q 2A7	260P807010	CHIP TRANSISTOR	UN2212
Q 2A8	260P806010	CHIP TRANSISTOR	DTA124EK
Q 2B0	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2B1	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2B3	260P807010	CHIP TRANSISTOR	UN2212
Q 2B4	260P806010	CHIP TRANSISTOR	DTA124EK
Q 2B5	260P807010	CHIP TRANSISTOR	UN2212
Q 2B8	260P807010	CHIP TRANSISTOR	UN2212
Q 2B9	260P806010	CHIP TRANSISTOR	DTA124EK
Q 2C0	260P802020	CHIP TRANSISTOR	2SA1235-F
Q 2C1	260P802020	CHIP TRANSISTOR	2SA1235-F
Q 2C2	260P562040	TRANSISTOR	2SA952-K
Q 2C3	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2C4	260P806010	CHIP TRANSISTOR	DTA124EK
Q 2C5	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2C6	260P802020	CHIP TRANSISTOR	2SA1235-F
Q 2C7	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2D0	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2D1	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2D2	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2D3	260P804030	CHIP TRANSISTOR	2SC3052-G
Q 2J0	260P807010	CHIP TRANSISTOR	UN2212
Q 2J2	260P802020	CHIP TRANSISTOR	2SA1235-F
Q 2J3	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2J4	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2J5	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2J7	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2J8	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2J9	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2K0	260P807010	CHIP TRANSISTOR	UN2212
Q 2K3	260P802030	CHIP TRANSISTOR	2SA1235-G
Q 2M0	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2M1	260P802030	CHIP TRANSISTOR	2SA1235-G
Q 2M2	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2M3	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2M4	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2N0	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2N4	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2N5	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2N6	260P807010	CHIP TRANSISTOR	UN2212
Q 2N7	260P807010	CHIP TRANSISTOR	UN2212
Q 2N8	260P807010	CHIP TRANSISTOR	UN2212
Q 2N9	260P807010	CHIP TRANSISTOR	UN2212
Q 2P1	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2P2	260P522020	TRANSISTOR	2SC3068-AA
Q 2P3	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 2P4	260P807010	CHIP TRANSISTOR	UN2212
Q 2Q1	260P807010	CHIP TRANSISTOR	UN2212
Q 2001	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 2007	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 2008	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 2009	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 2010	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 2011	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 2013	260P805030	CHIP TRANSISTOR	2SC3053-D
Q 301	260P807010	CHIP TRANSISTOR	UN2212
Q 3A0	260P629060	TRANSISTOR	2SC3331-S
Q 3A1	260C676030	TRANSISTOR	2SC3311A-S
Q 3A2	260C676030	TRANSISTOR	2SC3311A-S
Q 3A3	260P807010	CHIP TRANSISTOR	UN2212
Q 3A4	260P806010	CHIP TRANSISTOR	DTA124EK
Q 3A5	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 3B0	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 3B1	260P559030	TRANSISTOR	2SC1740S-S

[E]

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
Q 3B2	260P559030	TRANSISTOR	2SC1740S-S
Q 4A1	260P807010	CHIP TRANSISTOR	UN2212
Q 4A2	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 4A3	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 4A5	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 4A6	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 4A8	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 4A9	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 4B0	260P807010	CHIP TRANSISTOR	UN2212
Q 4B1	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 4B3	260P807010	CHIP TRANSISTOR	UN2212
Q 4B4	260P807010	CHIP TRANSISTOR	UN2212
Q 4B5	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 4B6	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 4B7	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 4B9	260P807010	CHIP TRANSISTOR	UN2212
Q 4C0	260P806010	CHIP TRANSISTOR	DTA124EK
Q 4C1	260P807010	CHIP TRANSISTOR	UN2212
Q 5A3	260P802020	CHIP TRANSISTOR	2SA1235-F
Q 5A4	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 5A5	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 5A6	260P806010	CHIP TRANSISTOR	DTA124EK
Q 5B1	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 5B2	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 5B3	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 5B4	260P559030	TRANSISTOR	2SC1740S-S
Q 5B5	260P559030	TRANSISTOR	2SC1740S-S
Q 5B6	260P559030	TRANSISTOR	2SC1740S-S
Q 5B7	260P559030	TRANSISTOR	2SC1740S-S
Q 5B8	260P806010	CHIP TRANSISTOR	DTA124EK
Q 5B9	260P864010	CHIP TRANSISTOR	2SK209GR
Q 5C0	260P807010	CHIP TRANSISTOR	UN2212
Q 5C2	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 5C3	260P807010	CHIP TRANSISTOR	UN2212
Q 5C4	260P807010	CHIP TRANSISTOR	UN2212
Q 6006	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 6007	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 6008	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 6009	260P807010	CHIP TRANSISTOR	UN2212
Q 6011	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 6013	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 6014	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 6016	260P807010	CHIP TRANSISTOR	UN2212
Q 6017	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 6018	260P807010	CHIP TRANSISTOR	UN2212
Q 6101	260P845030	CHIP TRANSISTOR	XN4501
Q 6102	260P818030	CHIP TRANSISTOR	2SC2412KS
Q 7A4	260P818010	CHIP TRANSISTOR	2SC2412KQ
Q 7A5	260P818010	CHIP TRANSISTOR	2SC2412KQ
Q 7A6	260P818010	CHIP TRANSISTOR	2SC2412KQ
Q 7A7	260P818010	CHIP TRANSISTOR	2SC2412KQ
Q 7A9	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 7B4	260P818010	CHIP TRANSISTOR	2SC2412KQ
Q 7B5	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 7B6	260P817030	CHIP TRANSISTOR	2SA1037K-S
Q 7C1	260P559050	TRANSISTOR	2SC1740S-E
Q 901	261P038010	TRANSISTOR	2SC4234

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION	
Q 902	260P522020	TRANSISTOR	2SC3068-AA	
Q 903	260P629010	TRANSISTOR	2SC3331-S	
Q 904	261P036010	TRANSISTOR	2SB1548	
Q 905	260P559050	TRANSISTOR	2SC1740S-E	
Q 906	260P630010	TRANSISTOR	2SD2012	
Q 907	260P559050	TRANSISTOR	2SC1740S-E	
Q 908	260C628010	TRANSISTOR	2SA1619A-Q	
Q 909	260P559050	TRANSISTOR	2SC1740S-E	
Q 910	260P560040	TRANSISTOR	2SA933S-S	
	DIODES			
D 2A0	264P568010	DIODE	1SS252	
D 2A1	264P568010	DIODE	1SS252	
D 2A2	264P568010	DIODE	1SS252	
D 2A3	264P568010	DIODE	1SS252	
D 2A4	264P568010	DIODE	1SS252	
D 2A5	264P568010	DIODE	1SS252	
D 2A6	264P568010	DIODE	1SS252	
D 2001	264P104030	DIODE	HZ5C1	
D 3A0	264P568010	DIODE	1SS252	
D 4A1	264P808010	CHIP DIODE	DAN202K	
D 4A3	264P390010	CHIP DIODE	1SS123	
D 4A4	264P568010	DIODE	1SS252	
D 4A5	264P500020	DIODE	EM01Z	
D 4A6	264P568010	DIODE	1SS252	
D 5A0	264P696010	LIGHT EMITTING DIODE	SLR-932C-20-AB-T1	[E]
D 5A0	264P795010	LIGHT EMITTING DIODE	SID1050CMTP5	[EB]
D 5A1	264P696010	LIGHT EMITTING DIODE	SLR-932C-20-AB-T1	[E]
D 5A1	264P795010	LIGHT EMITTING DIODE	SID1050CMTP5	[EB]
D 5A2	264P342070	DIODE	HZ4C2	
D 5A3	264P568010	DIODE	1SS252	
D 5A4	264P696020	LIGHT EMITTING DIODE	SLR-932A-20-B-T1	[E]
D 5A4	264P795010	LIGHT EMITTING DIODE	SID1050CMTP5	[EB]
D 5A5	264P696010	LIGHT EMITTING DIODE	SLR-932C-20-AB-T1	[E]
D 5A5	264P795010	LIGHT EMITTING DIODE	SID1050CMTP5	[EB]
D 5A6	264P568010	DIODE	1SS252	
D 5A7	264P568010	DIODE	1SS252	
D 5B0	264P568010	DIODE	1SS252	
D 5B1	264P568010	DIODE	1SS252	
D 5B2	264P808010	CHIP DIODE	DAN202K	
D 5B3	264P568010	DIODE	1SS252	
D 5B4	264P568010	DIODE	1SS252	
D 5B5	264P568010	DIODE	1SS252	
D 5B6	264P568010	DIODE	1SS252	
D 5B7	264P568010	DIODE	1SS252	
D 5B8	264P568010	DIODE	1SS252	
D 5B9	264P568010	DIODE	1SS252	
D 5C0	264P568010	DIODE	1SS252	
D 5C1	264P568010	DIODE	1SS252	
D 5C2	264P568010	DIODE	1SS252	
D 5C3	264P568010	DIODE	1SS252	
D 5C4	264P568010	DIODE	1SS252	
D 5C5	264P568010	DIODE	1SS252	
D 6201	264P568010	DIODE	1SS252	
D 701	264P621010	LIGHT EMITTING DIODE	SEL2210R TP2	
D 7A0	264P104050	DIODE	HZ9C1	

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
D 7B0	264P568010	DIODE	1SS252
D 801	264P568010	DIODE	1SS252
D 802	264P568010	DIODE	1SS252
D 803	264P568010	DIODE	1SS252
D 804	264P568010	DIODE	1SS252
D 805	264P568010	DIODE	1SS252
D 806	264P568010	DIODE	1SS252
D 809	264P568010	DIODE	1SS252
D 811	264P568010	DIODE	1SS252
D 813	264P568010	DIODE	1SS252
D 815	264P568010	DIODE	1SS252
D 816	264P568010	DIODE	1SS252
D 817	264P568010	DIODE	1SS252
D 818	264P568010	DIODE	1SS252
D 819	264P568010	DIODE	1SS252
D 820	264P568010	DIODE	1SS252
D 901	264P508040	DIODE	S1WB(A)60
D 903	264P699010	DIODE	AP01C
D 904	264P825010	DIODE	ERA15-02
D 907	264P695040	DIODE	RK34
D 908	264P695060	DIODE	RK36
D 909	264P663010	DIODE	D1NL20U
D 910	264P663010	DIODE	D1NL20U
D 911	264P527030	DIODE	D1NS4/AK04
D 912	264P456070	DIODE	RD2.4EB
D 913	264P104040	DIODE	HZ30-2
D 914	264P291070	DIODE	HZ20-3
D 917	264P452030	DIODE	HZ5C3
D 918	264P568010	DIODE	1SS252
D 920	264P500020	DIODE	EM01Z
D 921	264P568010	DIODE	1SS252
D 924	264P568010	DIODE	1SS252
D 926	264P488090	DIODE	RD16FB
D 928	264P483070	DIODE	RD5.1FB1
D 929	264P568010	DIODE	1SS252
D 930	264P485060	DIODE	RD7.5FB2
D 933	264P500020	DIODE	EM01Z
	FILTERS		
L 5A0	409P777030	CHIP EMI FILTER	BLM21A10
L 5A1	409P777030	CHIP EMI FILTER	BLM21A10
L 5A2	409P777030	CHIP EMI FILTER	BLM21A10
L 7A1	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 7A2	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 7A3	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 7A4	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 7A5	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 7A6	409P402030	EMI FILTER(CCD SKEW PCB ASSY)	FZ103N100
L 7A6	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 7A7	409P777030	CHIP EMI FILTER(TERMINAL PCB ASSY)	BLM21A10
L 901	351P038040	LINE FILTER	ELF-18D290HB
LC2A1	409P364010	LOW PASS FILTER	H322LSQ-1768MAD
	COILS		
L 201	325C167050	PEAKING COIL	100μH-J
L 202	325C167070	PEAKING COIL	150μH-J
L 203	325C166090	PEAKING COIL	33μH-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
L 204	325C167080	PEAKING COIL	180μH-J
L 2A1	321C112050	RF COIL	100μH-K
L 2A2	321C112050	RF COIL	100μH-K
L 2A5	325C167050	PEAKING COIL	100μH-J
L 2A6	325C167050	PEAKING COIL	100μH-J
L 2A7	325C167000	PEAKING COIL	39μH-J
L 2A8	325C167000	PEAKING COIL	39μH-J
L 2A9	325C166080	PEAKING COIL	27μH-J
L 2B0	325C166090	PEAKING COIL	33μH-J
L 2B1	325C166090	PEAKING COIL	33μH-J
L 2B2	325C167050	PEAKING COIL	100μH-J
L 2B3	325C167050	PEAKING COIL	100μH-J
L 2B5	325C167050	PEAKING COIL	100μH-J
L 2B6	325C166050	PEAKING COIL	15μH-J
L 2B7	325C167050	PEAKING COIL	100μH-J
L 2G4	325C167050	PEAKING COIL	100μH-J
L 2H0	325C167050	PEAKING COIL	100μH-J
L 2H1	325C168030	PEAKING COIL	470μH-J
L 2J0	325C167050	PEAKING COIL	100μH-J
L 2J1	325C166080	PEAKING COIL	27μH-J
L 2J2	325C167020	PEAKING COIL	56μH-J
L 2J3	325C167050	PEAKING COIL	100μH-J
L 2J4	325C168000	PEAKING COIL	270μH-J
L 2J5	325C166010	PEAKING COIL	6.8μH-J
L 2J6	325C166030	PEAKING COIL	10μH-J
L 2J7	325C167090	PEAKING COIL	220μH-J
L 2J8	325C166090	PEAKING COIL	33μH-J
L 2K1	325C167050	PEAKING COIL	100μH-J
L 2N0	325C168010	PEAKING COIL	330μH-J
L 2N2	325C167050	PEAKING COIL	100μH-J
L 2Q2	325C167010	PEAKING COIL	47μH-J
L 2Q3	325C166070	PEAKING COIL	22μH-J
L 2Q5	325C167050	PEAKING COIL	100μH-J
L 2Q6	325C167050	PEAKING COIL	100μH-J
L 2R4	325C167030	PEAKING COIL	68μH-J
L 2S1	325C168070	PEAKING COIL	1000μH-J
L 2001	325C167050	PEAKING COIL	100μH-J
L 2002	325C166060	PEAKING COIL	18μH-J
L 2005	325C167050	PEAKING COIL	100μH-J
L 2007	325C167050	PEAKING COIL	100μH-J
L 2009	325C167050	PEAKING COIL	100μH-J
L 2010	325C167040	PEAKING COIL	82μH-J
L 3A0	321C113070	RF COIL	1000μH-K
L 3A1	321C114080	RF COIL	8200μH-J
L 4A0	325C167050	PEAKING COIL	100μH-J
L 501	325C122050	PEAKING COIL	100μH-K
L 6002	325C167050	PEAKING COIL	100μH-J
L 6003	325C167050	PEAKING COIL	100μH-J
L 6005	325C167050	PEAKING COIL	100μH-J
L 6008	325C167050	PEAKING COIL	100μH-J
L 6009	325C167040	PEAKING COIL	82μH-J
L 6011	325C167050	PEAKING COIL	100μH-J
L 6013	325C166030	PEAKING COIL	10μH-J
L 6101	325C167050	PEAKING COIL	100μH-J
L 6201	325C167040	PEAKING COIL	82μH-J
L 6202	325C166020	PEAKING COIL	8.2μH-J
L 7A0	325C100010	PEAKING COIL	1.0μH-K

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
L 7A1	325C100O10	PEAKING COIL(CCD SKEW PCB ASSY)	1.0μH-K
L 7A2	325C100O10	PEAKING COIL(CCD SKEW PCB ASSY)	1.0μH-K
L 7A3	325C100O10	PEAKING COIL(CCD SKEW PCB ASSY)	1.0μH-K
L 7A4	325C100O10	PEAKING COIL(CCD SKEW PCB ASSY)	1.0μH-K
L 7A5	325C100O10	PEAKING COIL(CCD SKEW PCB ASSY)	1.0μH-K
L 7A7	325C107O10	PEAKING COIL(CCD SKEW PCB ASSY)	47μH-J
L 7A8	325C100O10	PEAKING COIL	1.0μH-K
L 7A9	325C100O10	PEAKING COIL	1.0μH-K
L 7B0	325C100O10	PEAKING COIL	1.0μH-K
L 7B5	325C105O10	PEAKING COIL	1.0μH-J
L 7B6	325C105O10	PEAKING COIL	1.0μH-J
L 7B7	325C105O10	PEAKING COIL	1.0μH-J
L 7B8	325C105O10	PEAKING COIL	1.0μH-J
L 7B9	325C105O10	PEAKING COIL	1.0μH-J
L 902	321C141O90	RF COIL	33μH-K
LC6001	332P015O10	HORIZ OSC COIL	K10-F5
T 3A0	409P852O30	BIAS OSCILLATOR COIL	
	TRANSFORMERS		
T 901	350P711O20	POWER TRANSFORMER	ETS29AK2C6AC
	VARIABLE RESISTORS		
R 908	109C010O10	SOLID RESISTOR	1/2W 1MΩ-K
VR201	127C380O50	SEMIFIXED RESISTOR	1/5W B2kΩ-M
VR202	127C380O50	SEMIFIXED RESISTOR	1/5W B2kΩ-M
VR2A0	127C480O90	SEMIFIXED RESISTOR	1/5W B20kΩ+-25%
VR2A1	127C490O90	SEMIFIXED RESISTOR	1/5W B20kΩ+-25%
VR2A2	127C480O80	SEMIFIXED RESISTOR	1/5W B10kΩ+-25%
VR2A5	127C480O90	SEMIFIXED RESISTOR	1/5W B20kΩ+-25%
VR2001	127C391O10	SEMIFIXED RESISTOR	1/5W B50kΩ-M
VR3A0	127C381O20	SEMIFIXED RESISTOR	1/5W B100kΩ-M
VR3A1	127C380O80	SEMIFIXED RESISTOR	1/5W B10kΩ-M
VR4A0	127C391O20	SEMIFIXED RESISTOR	1/5W B100kΩ-M
VR4A1	127C391O20	SEMIFIXED RESISTOR	1/5W B100kΩ-M
VR5A0	127C390O70	SEMIFIXED RESISTOR	1/5W B5kΩ-M
VR6000	127C490O90	SEMIFIXED RESISTOR	1/5W B20kΩ+-25%
VR701	129D167O60	PCB VR	1/20W B5kΩ-15F CS
VR7A0	127C490O40	SEMIFIXED RESISTOR	1/5W B1kΩ+-25%
	RESISTORS		
JP5A2	103P409O50	CHIP RESISTOR	0.1W 0Ω(2125)
R 201	103P471O70	CHIP RESISTOR	1/10W 470Ω-F
R 202	103P400O10	CHIP RESISTOR	1/10W 10Ω-J
R 203	103P400O10	CHIP RESISTOR	1/10W 10Ω-J
R 204	103P471O50	CHIP RESISTOR	1/10W 390Ω-F
R 205	103P409O90	CHIP RESISTOR	1/10W 75Ω-J
R 206	103P400O10	CHIP RESISTOR	1/10W 10Ω-J
R 207	103P400O10	CHIP RESISTOR	1/10W 10Ω-J
R 208	103P470O10	CHIP RESISTOR	1/10W 100Ω-F
R 209	103P470O90	CHIP RESISTOR	1/10W 220Ω-F
R 210	103P400O10	CHIP RESISTOR	1/10W 10Ω-J
R 211	103P400O10	CHIP RESISTOR	1/10W 10Ω-J
R 212	103P470O80	CHIP RESISTOR	1/10W 200Ω-F
R 213	103P471O70	CHIP RESISTOR	1/10W 470Ω-F
R 214	103P471O60	CHIP RESISTOR	1/10W 430Ω-F
R 215	103P473O30	CHIP RESISTOR	1/10W 2.2kΩ-F
R 216	103P472O70	CHIP RESISTOR	1/10W 1.2kΩ-F
R 217	103P402O70	CHIP RESISTOR	1/10W 1.5kΩ-J
R 218	103P402O90	CHIP RESISTOR	1/10W 2.2kΩ-J
R 219	103P403O70	CHIP RESISTOR	1/10W 10kΩ-J
R 223	103P404O00	CHIP RESISTOR	1/10W 18kΩ-J
R 225	103P403O50	CHIP RESISTOR	1/10W 6.8kΩ-J
R 227	103P401O70	CHIP RESISTOR	1/10W 220Ω-J
R 228	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 229	103P403O10	CHIP RESISTOR	1/10W 3.3kΩ-J
R 230	103P402O60	CHIP RESISTOR	1/10W 1.2kΩ-J
R 231	103P402O60	CHIP RESISTOR	1/10W 1.2kΩ-J
R 232	103P402O60	CHIP RESISTOR	1/10W 1.2kΩ-J
R 233	103P403O10	CHIP RESISTOR	1/10W 3.3kΩ-J
R 234	103P409O50	CHIP RESISTOR	0.1W 0Ω(2125)
R 236	103P476O00	CHIP RESISTOR	1/10W 30kΩ-F
R 237	103P403O70	CHIP RESISTOR	1/10W 10kΩ-J
R 238	103P401O30	CHIP RESISTOR	1/10W 100Ω-J
R 240	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 241	103P401O70	CHIP RESISTOR	1/10W 220Ω-J
R 242	103P403O50	CHIP RESISTOR	1/10W 6.8kΩ-J
R 243	103P402O70	CHIP RESISTOR	1/10W 1.5kΩ-J
R 244	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 245	103P401O60	CHIP RESISTOR	1/10W 180Ω-J
R 247	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 248	103P403O50	CHIP RESISTOR	1/10W 6.8kΩ-J
R 249	103P403O10	CHIP RESISTOR	1/10W 3.3kΩ-J
R 2A2	103P473O80	CHIP RESISTOR	1/10W 3.6kΩ-F
R 2A3	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 2A4	103P472O50	CHIP RESISTOR	1/10W 1kΩ-F
R 2A5	103P473O90	CHIP RESISTOR	1/10W 3.9kΩ-F
R 2A6	103P403O00	CHIP RESISTOR	1/10W 2.7kΩ-J
R 2A7	103P402O30	CHIP RESISTOR	1/10W 680Ω-J
R 2A8	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 2B0	103P406O10	CHIP RESISTOR	1/10W 1MΩ-J
R 2B1	103P403O60	CHIP RESISTOR	1/10W 8.2kΩ-J
R 2B2	103P403O30	CHIP RESISTOR	1/10W 4.7kΩ-J
R 2B3	103P402O80	CHIP RESISTOR	1/10W 1.8kΩ-J
R 2B4	103P402O70	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2B6	103P409O50	CHIP RESISTOR	0.1W 0Ω(2125)
R 2B7	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 2B8	103P403O40	CHIP RESISTOR	1/10W 5.6kΩ-J
R 2B9	103P402O70	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2C0	103P402O10	CHIP RESISTOR	1/10W 470Ω-J
R 2C2	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 2C3	103P404O10	CHIP RESISTOR	1/10W 22kΩ-J
R 2C4	103P403O60	CHIP RESISTOR	1/10W 8.2kΩ-J
R 2C5	103P402O80	CHIP RESISTOR	1/10W 1.8kΩ-J
R 2C6	103P471O90	CHIP RESISTOR	1/10W 560Ω-F
R 2C7	103P401O30	CHIP RESISTOR	1/10W 100Ω-J
R 2C9	103P403O80	CHIP RESISTOR	1/10W 12kΩ-J
R 2D1	103P471O30	CHIP RESISTOR	1/10W 330Ω-F
R 2D3	103P470O10	CHIP RESISTOR	1/10W 100Ω-F
R 2D4	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 2D5	103P402O50	CHIP RESISTOR	1/10W 1kΩ-J
R 2D6	103P401O80	CHIP RESISTOR	1/10W 270Ω-J
R 2D7	103P401O80	CHIP RESISTOR	1/10W 270Ω-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 2D9	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 2E2	103P472010	CHIP RESISTOR	1/10W 680Ω-F
R 2E3	103P472070	CHIP RESISTOR	1/10W 1.2kΩ-F
R 2E4	103P472060	CHIP RESISTOR	1/10W 1.1kΩ-F
R 2E5	103P471070	CHIP RESISTOR	1/10W 470Ω-F
R 2E6	103P403090	CHIP RESISTOR	1/10W 15kΩ-J
R 2E7	103P404000	CHIP RESISTOR	1/10W 18kΩ-J
R 2F0	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2F1	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2F2	103P471080	CHIP RESISTOR	1/10W 510Ω-F
R 2F3	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2F4	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2F5	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2F6	103P402080	CHIP RESISTOR	1/10W 1.8kΩ-J
R 2F7	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2F8	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2F9	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 2G0	103P472050	CHIP RESISTOR	1/10W 1kΩ-F
R 2G3	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2G5	103P404080	CHIP RESISTOR	1/10W 82kΩ-J
R 2G6	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 2G7	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 2H1	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 2H2	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 2H3	103P403080	CHIP RESISTOR	1/10W 12kΩ-J
R 2H4	103P402000	CHIP RESISTOR	1/10W 390Ω-J
R 2H5	103P402040	CHIP RESISTOR	1/10W 820Ω-J
R 2H6	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2H7	103P401090	CHIP RESISTOR	1/10W 330Ω-J
R 2H8	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2H9	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2J1	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 2J2	103P471090	CHIP RESISTOR	1/10W 560Ω-F
R 2J3	103P472040	CHIP RESISTOR	1/10W 910Ω-F
R 2J6	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2J7	103P470070	CHIP RESISTOR	1/10W 180Ω-F
R 2J8	103P403020	CHIP RESISTOR	1/10W 3.9kΩ-J
R 2J9	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2K1	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 2K2	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 2K4	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2K5	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 2K6	103P403080	CHIP RESISTOR	1/10W 12kΩ-J
R 2K7	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 2K8	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 2K9	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2L0	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 2L1	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2L2	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 2L3	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2L4	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2L7	103P402040	CHIP RESISTOR	1/10W 820Ω-J
R 2L8	103P403020	CHIP RESISTOR	1/10W 3.9kΩ-J
R 2L9	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 2M0	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 2M1	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2M2	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 2M3	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2M4	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2M5	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2M6	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2M9	103P401050	CHIP RESISTOR	1/10W 150Ω-J
R 2N0	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 2N1	103P403090	CHIP RESISTOR	1/10W 15kΩ-J
R 2N2	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2N3	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 2N4	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2N5	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 2N6	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 2N7	103P401080	CHIP RESISTOR	1/10W 270Ω-J
R 2N8	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J
R 2P2	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J
R 2P3	103P473030	CHIP RESISTOR	1/10W 2.2kΩ-F
R 2P4	103P472090	CHIP RESISTOR	1/10W 1.5kΩ-F
R 2P5	103P409090	CHIP RESISTOR	1/10W 75Ω-J
R 2Q0	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 2Q1	103P401090	CHIP RESISTOR	1/10W 330Ω-J
R 2Q2	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2Q3	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2Q4	103P474050	CHIP RESISTOR	1/10W 6.8kΩ-F
R 2Q5	103P472060	CHIP RESISTOR	1/10W 1.1kΩ-F
R 2Q6	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 2R0	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2R1	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 2S0	103P403020	CHIP RESISTOR	1/10W 3.9kΩ-J
R 2S1	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2S3	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 2S4	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2S5	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 2S6	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 2S7	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2S8	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 2S9	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 2T0	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2T9	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 2U0	103P403060	CHIP RESISTOR	1/10W 8.2kΩ-J
R 2U1	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 2U2	103P401090	CHIP RESISTOR	1/10W 330Ω-J
R 2U3	103P403080	CHIP RESISTOR	1/10W 12kΩ-J
R 2U4	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 2U5	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 2U6	103P402040	CHIP RESISTOR	1/10W 820Ω-J
R 2U7	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2U8	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2W1	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 2W3	103P404060	CHIP RESISTOR	1/10W 56kΩ-J
R 2W4	103P404060	CHIP RESISTOR	1/10W 56kΩ-J
R 2W5	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 2Z1	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 2Z2	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2Z3	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2001	103P402080	CHIP RESISTOR	1/10W 1.8kΩ-J
R 2002	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 2003	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2004	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 2007	103P401050	CHIP RESISTOR	1/10W 150Ω-J
R 2008	103P476090	CHIP RESISTOR	1/10W 68kΩ-F
R 2009	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 2010	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 2011	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 2012	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 2013	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 2027	103P476080	CHIP RESISTOR	1/10W 62kΩ-F
R 2028	103P405030	CHIP RESISTOR	1/10W 220kΩ-J
R 2031	103P475070	CHIP RESISTOR	1/10W 22kΩ-F
R 2032	103P474090	CHIP RESISTOR	1/10W 10kΩ-F
R 2033	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 2034	103P478010	CHIP RESISTOR	1/10W 220kΩ-F
R 2035	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 2036	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 2037	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 2041	103P402080	CHIP RESISTOR	1/10W 1.8kΩ-J
R 2042	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 2043	103P405030	CHIP RESISTOR	1/10W 220kΩ-J
R 2044	103P403050	CHIP RESISTOR	1/10W 6.8kΩ-J
R 2046	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 301	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 302	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 303	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 304	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 305	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 306	103P404070	CHIP RESISTOR	1/10W 68kΩ-J
R 307	103P476020	CHIP RESISTOR	1/10W 36kΩ-F
R 308	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 309	103P403000	CHIP RESISTOR	1/10W 2.7kΩ-J
R 310	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 311	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 312	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 313	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 314	103P403000	CHIP RESISTOR	1/10W 2.7kΩ-J
R 315	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 317	103P751000	FUSE RESISTOR	1/4W 56Ω-J
R 3A0	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 3A1	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 3A2	103P404020	CHIP RESISTOR	1/10W 27kΩ-J
R 3A3	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 3A4	103P401060	CHIP RESISTOR	1/10W 180Ω-J
R 3A6	103P403060	CHIP RESISTOR	1/10W 8.2kΩ-J
R 3A7	103P401040	CHIP RESISTOR	1/10W 120Ω-J
R 3A8	103P400010	CHIP RESISTOR	1/10W 10Ω-J
R 3B0	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 3B1	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 3B2	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 3B3	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 3B4	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 3B6	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 3B7	103P401080	CHIP RESISTOR	1/10W 270Ω-J
R 3C4	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 3C5	103P401060	CHIP RESISTOR	1/10W 180Ω-J
R 3D0	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 3D1	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 3D2	103P404060	CHIP RESISTOR	1/10W 56kΩ-J
R 3E5	103P404000	CHIP RESISTOR	1/10W 18kΩ-J
R 3E6	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 3G0	103P401000	CHIP RESISTOR	1/10W 56Ω-J [E]
R 3G5	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 3G9	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 3H0	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 4A0	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 4A1	103P403020	CHIP RESISTOR	1/10W 3.9kΩ-J
R 4A2	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 4A3	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 4A5	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 4A6	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 4A7	103P477010	CHIP RESISTOR	1/10W 82kΩ-F
R 4A9	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 4B0	103P405020	CHIP RESISTOR	1/10W 180kΩ-J
R 4B2	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 4B5	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 4B6	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 4B7	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 4B9	103P475010	CHIP RESISTOR	1/10W 12kΩ-F
R 4C1	103P474090	CHIP RESISTOR	1/10W 10kΩ-F
R 4C3	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4C4	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4C6	103P404000	CHIP RESISTOR	1/10W 18kΩ-J
R 4C8	103P404080	CHIP RESISTOR	1/10W 82kΩ-J
R 4C9	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 4D1	103P403080	CHIP RESISTOR	1/10W 12kΩ-J
R 4D2	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 4D3	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4D5	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4D6	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 4D7	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4D8	103P404060	CHIP RESISTOR	1/10W 56kΩ-J
R 4D9	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J
R 4E0	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 4E2	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 4E3	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4E4	103P404060	CHIP RESISTOR	1/10W 56kΩ-J
R 4E5	103P405050	CHIP RESISTOR	1/10W 330kΩ-J
R 4E6	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 4E7	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 4F1	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 4F2	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J
R 4F4	103P405030	CHIP RESISTOR	1/10W 220kΩ-J
R 4F6	103P405030	CHIP RESISTOR	1/10W 220kΩ-J
R 4F7	103P405010	CHIP RESISTOR	1/10W 150kΩ-J
R 4F8	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 4F9	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 4G1	103P405030	CHIP RESISTOR	1/10W 220kΩ-J
R 4G2	103P403090	CHIP RESISTOR	1/10W 15kΩ-J
R 4G3	103P404000	CHIP RESISTOR	1/10W 18kΩ-J
R 4G5	103P405020	CHIP RESISTOR	1/10W 180kΩ-J
R 4G6	103P405010	CHIP RESISTOR	1/10W 150kΩ-J
R 4G7	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 4G8	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 4H2	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 4H3	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 4H4	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 4H8	103P474080	CHIP RESISTOR	1/10W 9.1kΩ-F
R 4H9	103P475050	CHIP RESISTOR	1/10W 18kΩ-F
R 4K2	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 4K3	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 4K4	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 4K5	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 4K6	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 4K7	103P402070	CHIP RESISTOR	1/10W 1.5kΩ-J
R 501	103P404040	CHIP RESISTOR	1/10W 39kΩ-J
R 5A1	103P405010	CHIP RESISTOR	1/10W 150kΩ-J
R 5A2	103P405010	CHIP RESISTOR	1/10W 150kΩ-J
R 5A3	103P405010	CHIP RESISTOR	1/10W 150kΩ-J
R 5A5	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 5B0	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 5B1	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5B2	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5B3	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 5B4	103P403000	CHIP RESISTOR	1/10W 2.7kΩ-J
R 5B5	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5C1	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 5C6	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5C7	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 5C8	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5C9	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5D0	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 5D1	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5D2	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5D3	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 5D4	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5D5	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 5D6	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 5D7	103P476000	CHIP RESISTOR	1/10W 30kΩ-F
R 5D8	103P476000	CHIP RESISTOR	1/10W 30kΩ-F
R 5E0	103P476000	CHIP RESISTOR	1/10W 30kΩ-F
R 5E1	103P475030	CHIP RESISTOR	1/10W 15kΩ-F
R 5E2	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5E3	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5E4	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5E5	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5E8	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 5E9	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 5F0	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 5F4	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 5F5	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5F6	103P403080	CHIP RESISTOR	1/10W 12kΩ-J
R 5F7	103P404000	CHIP RESISTOR	1/10W 18kΩ-J
R 5F8	103P472060	CHIP RESISTOR	1/10W 1.1kΩ-F
R 5G0	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 5G3	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5G4	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 5G5	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5G6	103P406090	CHIP METAL RESISTOR	1/10W 4.7MΩ-K
R 5G7	103P406090	CHIP METAL RESISTOR	1/10W 4.7MΩ-K

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 5G8	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 5G9	103P477010	CHIP RESISTOR	1/10W 82kΩ-F
R 5H0	103P476030	CHIP RESISTOR	1/10W 39kΩ-F
R 5H1	103P475060	CHIP RESISTOR	1/10W 20kΩ-F
R 5H2	103P479070	CHIP RESISTOR	1/10W 1MΩ-F
R 5H3	103P478050	CHIP RESISTOR	1/10W 330kΩ-F
R 5H4	103P479000	CHIP METAL RESISTOR	1/10W 510kΩ-F
R 5H5	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J
R 5H6	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 5H8	103P404060	CHIP RESISTOR	1/10W 56kΩ-J
R 5J0	103P476050	CHIP RESISTOR	1/10W 47kΩ-F
R 5J1	103P475070	CHIP RESISTOR	1/10W 22kΩ-F
R 5J2	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 5J3	103P476010	CHIP RESISTOR	1/10W 33kΩ-F
R 5J4	103P476010	CHIP RESISTOR	1/10W 33kΩ-F
R 5J5	103P474090	CHIP RESISTOR	1/10W 10kΩ-F
R 5J6	103P474090	CHIP RESISTOR	1/10W 10kΩ-F
R 5J7	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 5J8	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 5J9	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 5K0	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 5K1	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 5K2	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 5K3	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 5K4	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 5K5	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 5K6	103P404020	CHIP RESISTOR	1/10W 27kΩ-J
R 5K7	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 5K8	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 5L0	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 5L4	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5L5	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5L6	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M0	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M1	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M2	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 5M3	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M4	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M5	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 5M6	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M7	103P403070	CHIP RESISTOR	1/10W 10kΩ-J
R 5M8	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 5N2	103P403010	CHIP RESISTOR	1/10W 3.3kΩ-J
R 5N4	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 5N5	103P404070	CHIP RESISTOR	1/10W 68kΩ-J
R 5Q2	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q3	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q4	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q5	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q6	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q7	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q8	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5Q9	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R0	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R1	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R2	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R3	103P402010	CHIP RESISTOR	1/10W 470Ω-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 5R4	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R5	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R6	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R7	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R8	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5R9	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5S0	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5S1	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5S2	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5S3	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 5S4	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 6002	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 6003	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 6004	103P475050	CHIP RESISTOR	1/10W 18kΩ-F
R 6005	103P475030	CHIP RESISTOR	1/10W 15kΩ-F
R 6006	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 6007	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 6008	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 6009	103P403030	CHIP RESISTOR	1/10W 4.7kΩ-J
R 6010	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 6011	103P404010	CHIP RESISTOR	1/10W 22kΩ-J
R 6012	103P403080	CHIP RESISTOR	1/10W 12kΩ-J
R 6013	103P476080	CHIP RESISTOR	1/10W 62kΩ-F
R 6014	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 6015	103P405020	CHIP RESISTOR	1/10W 180kΩ-J
R 6016	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 6027	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6028	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6030	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6031	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 6032	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6033	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6034	103P403000	CHIP RESISTOR	1/10W 2.7kΩ-J
R 6035	103P402080	CHIP RESISTOR	1/10W 1.8kΩ-J
R 6036	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 6037	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6038	103P402010	CHIP RESISTOR	1/10W 470Ω-J
R 6039	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 6042	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 6043	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6044	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 6045	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 6046	103P402030	CHIP RESISTOR	1/10W 680Ω-J
R 6047	103P404040	CHIP RESISTOR	1/10W 39kΩ-J
R 6048	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 6049	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 6050	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 6054	103P472070	CHIP RESISTOR	1/10W 1.2kΩ-F
R 6061	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 6063	103P403040	CHIP RESISTOR	1/10W 5.6kΩ-J
R 6064	103P402000	CHIP RESISTOR	1/10W 390Ω-J
R 6065	103P404030	CHIP RESISTOR	1/10W 33kΩ-J
R 6068	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6081	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6101	103P404050	CHIP RESISTOR	1/10W 47kΩ-J
R 6102	103P404040	CHIP RESISTOR	1/10W 39kΩ-J
R 6103	103P402020	CHIP RESISTOR	1/10W 560Ω-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
R 6104	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 6105	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 6106	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6108	103P403020	CHIP RESISTOR	1/10W 3.9kΩ-J
R 6109	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6110	103P402090	CHIP RESISTOR	1/10W 2.2kΩ-J
R 6111	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 6203	103P402080	CHIP RESISTOR	1/10W 1.8kΩ-J
R 7A0	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 7A1	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 7A7	103P402040	CHIP RESISTOR	1/10W 820Ω-J
R 7A8	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 7A9	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 7B0	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 7B8	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 7B9	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 7C1	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 7C2	103P402040	CHIP RESISTOR	1/10W 820Ω-J
R 7C3	103P402020	CHIP RESISTOR	1/10W 560Ω-J
R 7C4	103P471090	CHIP RESISTOR	1/10W 560Ω-F
R 7C5	103P471090	CHIP RESISTOR	1/10W 560Ω-F
R 7C6	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 7C7	103P405030	CHIP RESISTOR	1/10W 220kΩ-J
R 7C8	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 7D0	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 7D1	103P404020	CHIP RESISTOR	1/10W 27kΩ-J
R 7D2	103P403090	CHIP RESISTOR	1/10W 15kΩ-J
R 7D3	103P403000	CHIP RESISTOR	1/10W 2.7kΩ-J
R 7E6	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
R 7E7	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 7E8	103P406010	CHIP RESISTOR	1/10W 1MΩ-J
R 7G9	103P405010	CHIP RESISTOR	1/10W 150kΩ-J
R 7H0	103P404090	CHIP RESISTOR	1/10W 100kΩ-J
R 7H1	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 7H2	103P402040	CHIP RESISTOR	1/10W 820Ω-J
R 7H3	103P402060	CHIP RESISTOR	1/10W 1.2kΩ-J
R 7H4	103P402050	CHIP RESISTOR	1/10W 1kΩ-J
R 7H5	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 7H6	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 7H7	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 7H8	103P401030	CHIP RESISTOR	1/10W 100Ω-J
R 7H9	103P401070	CHIP RESISTOR	1/10W 220Ω-J
R 901	109D036040	COMPOSITION RESISTOR	1/2W 8.2MΩ-K
R 930	102P108060	WIRE RESISTOR	2W 3.3Ω-J
RJ 01	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 02	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 03	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 04	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 05	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 06	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 07	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 08	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 09	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 10	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 11	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 12	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
RJ 13	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 15	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 16	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 17	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 18	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 19	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 21	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 22	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 23	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 24	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 25	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 26	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 27	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 28	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 29	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 30	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 31	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 32	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 33	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 34	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 35	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 36	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 37	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 38	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 41	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 42	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 43	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 44	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 45	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 46	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 47	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 48	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 49	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 50	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 51	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 52	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 53	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 1	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 2	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 3	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 4	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
RJ 5	103P409050	CHIP RESISTOR	0.1W 0Ω(2125)
	CAPACITORS AND TRIMMERS		
C 201	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 203	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 204	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 205	154P333050	CHIP CAPACITOR	CH50V 100pF-J
C 206	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 207	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 208	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 209	154P333050	CHIP CAPACITOR	CH50V 100pF-J
C 210	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 211	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 213	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 216	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 217	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 218	154P333070	CHIP CAPACITOR	CH50V 120pF-J
C 219	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 220	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 221	154P333010	CHIP CAPACITOR	CH50V 68pF-J
C 222	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 223	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 224	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 225	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 226	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 228	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 229	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 230	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 231	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 233	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 234	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 235	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 236	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 238	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 240	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 242	154P321080	CHIP CAPACITOR	SL50V 18pF-J
C 244	154P324080	CHIP CAPACITOR	SL50V 330pF-J
C 245	141P135080	CHIP CAPACITOR	F25V 0.1μF-Z
C 247	141P131000	CHIP CAPACITOR	B50V 1200pF-K
C 251	154P330090	CHIP CAPACITOR	CH50V 8pF-C
C 253	141P135000	CHIP CAPACITOR	F25V 0.22μF-Z
C 256	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2A2	154P324060	CHIP CAPACITOR	SL50V 270pF-J
C 2A4	154P325000	CHIP CAPACITOR	SL50V 390pF-J
C 2A5	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 2A8	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2A9	141P137040	CHIP CAPACITOR	B25V 0.022μF-K
C 2B0	154P322000	CHIP CAPACITOR	SL50V 22pF-J
C 2B1	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 2B3	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 2B5	141P137040	CHIP CAPACITOR	B25V 0.022μF-K
C 2B7	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2C3	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 2C4	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 2C6	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 2C7	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 2D3	154P332010	CHIP CAPACITOR	CH50V 27pF-J
C 2D4	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2D5	154P321060	CHIP CAPACITOR	SL50V 15pF-J
C 2D8	154P323000	CHIP CAPACITOR	SL50V 56pF-J
C 2E0	154P321060	CHIP CAPACITOR	SL50V 15pF-J
C 2E1	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 2F0	154P323080	CHIP CAPACITOR	SL50V 120pF-J
C 2F1	154P320050	CHIP CAPACITOR	SL50V 3pF-C
C 2F2	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 2F3	154P320070	CHIP CAPACITOR	SL50V 5pF-C
C 2F4	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2F6	154P324060	CHIP CAPACITOR	SL50V 270pF-J
C 2F7	154P322000	CHIP CAPACITOR	SL50V 22pF-J
C 2F8	154P324060	CHIP CAPACITOR	SL50V 270pF-J
C 2F9	154P324020	CHIP CAPACITOR	SL50V 180pF-J
C 2G0	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2G1	154P322060	CHIP CAPACITOR	SL50V 39pF-J

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
C 2G2	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2G3	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2G5	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2H0	154P322060	CHIP CAPACITOR	SL50V 39pF-J
C 2H3	154P324040	CHIP CAPACITOR	SL50V 220pF-J
C 2H4	154P322040	CHIP CAPACITOR	SL50V 33pF-J
C 2J0	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2J2	154P323000	CHIP CAPACITOR	SL50V 56pF-J
C 2J3	154P322060	CHIP CAPACITOR	SL50V 39pF-J
C 2J7	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2J8	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2J9	154P322040	CHIP CAPACITOR	SL50V 33pF-J
C 2K0	154P323000	CHIP CAPACITOR	SL50V 56pF-J
C 2K1	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 2K2	154P322040	CHIP CAPACITOR	SL50V 33pF-J
C 2K3	154P323020	CHIP CAPACITOR	SL50V 68pF-J
C 2K4	154P323000	CHIP CAPACITOR	SL50V 56pF-J
C 2K5	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2K7	154P321040	CHIP CAPACITOR	SL50V 12pF-J
C 2M0	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 2M1	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2M3	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2M6	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2M7	141P137040	CHIP CAPACITOR	B25V 0.022μF-K
C 2N0	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2N1	154P324000	CHIP CAPACITOR	SL50V 150pF-J
C 2N2	154P324000	CHIP CAPACITOR	SL50V 150pF-J
C 2N3	154P323020	CHIP CAPACITOR	SL50V 68pF-J
C 2N5	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2N7	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 2N8	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2P0	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2Q0	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2Q2	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2Q4	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2Q5	141P132000	CHIP CAPACITOR	B50V 8200pF-K
C 2Q6	154P321060	CHIP CAPACITOR	SL50V 15pF-J
C 2Q9	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2R1	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2R4	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2R5	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 2R6	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 2R7	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 2U1	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2U2	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2U5	154P322000	CHIP CAPACITOR	SL50V 22pF-J
C 2U7	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2W2	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2002	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2005	154P332050	CHIP CAPACITOR	CH50V 39pF-J
C 2008	154P331030	CHIP CAPACITOR	CH50V 12pF-J
C 2016	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2018	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2019	154P323080	CHIP CAPACITOR	SL50V 120pF-J
C 2030	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2050	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
C 2051	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 2055	154P331030	CHIP CAPACITOR	CH50V 12pF-J
C 2060	154P331010	CHIP CAPACITOR	CH50V 10pF-C
C 2061	154P322040	CHIP CAPACITOR	SL50V 33pF-J
C 2062	154P332050	CHIP CAPACITOR	CH50V 39pF-J
C 2063	154P323060	CHIP CAPACITOR	SL50V 100pF-J
C 2064	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 2065	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 300	154P327040	CHIP CAPACITOR	SL50V 3900pF-J
C 304	141P130040	CHIP CAPACITOR	B50V 390pF-K
C 309	154P323060	CHIP CAPACITOR	SL50V 100pF-J
C 3A1	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 3A2	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 3A3	141P130060	CHIP CAPACITOR	B50V 560pF-K
C 3A8	141P131010	CHIP CAPACITOR	B50V 1500pF-K
C 3B9	141P137090	CHIP CAPACITOR	B25V 0.056μF-K
C 3D3	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 3D4	141P138030	CHIP CAPACITOR	B25V 0.12μF-K
C 3D5	141P137070	CHIP CAPACITOR	B25V 0.039μF-K
C 4A0	141P132010	CHIP CAPACITOR	B50V 0.01μF-K
C 4A1	141P132010	CHIP CAPACITOR	B50V 0.01μF-K
C 4A5	141P137070	CHIP CAPACITOR	B25V 0.039μF-K
C 4A7	154P326000	CHIP CAPACITOR	SL50V 1000pF-J
C 4B5	141P130010	CHIP CAPACITOR	B50V 220pF-K
C 4B7	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 4B8	141P131060	CHIP CAPACITOR	B50V 3900pF-K
C 4C0	141P139000	CHIP CAPACITOR	B25V 0.056μF-K
C 4C3	141P131080	CHIP CAPACITOR	B50V 5600pF-K
C 4C7	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 4C8	141P139030	CHIP CAPACITOR	B25V 0.1μF-K
C 4C9	141P131080	CHIP CAPACITOR	B50V 5600pF-K
C 4D1	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 4D2	141P130090	CHIP CAPACITOR	B50V 1000pF-K
C 4D3	154P335010	CHIP CAPACITOR	CH50V 470pF-J
C 4E1	154P335010	CHIP CAPACITOR	CH50V 470pF-J
C 4E7	141P131050	CHIP CAPACITOR	B50V 3300pF-K
C 4E9	141P132010	CHIP CAPACITOR	B50V 0.01μF-K
C 4F0	141P131060	CHIP CAPACITOR	B50V 3900pF-K
C 4F3	141P135000	CHIP CAPACITOR	F25V 0.22μF-Z
C 502	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 504	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 5A0	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5A1	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5A2	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5A5	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5A6	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 5A8	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 5B0	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 5B1	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5B2	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5B3	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 5B4	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 5B5	141P137080	CHIP CAPACITOR	B25V 0.047μF-K
C 5B6	141P133080	CHIP CAPACITOR	F50V 0.01μF-Z
C 5B7	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 5B8	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z
C 5B9	141P133090	CHIP CAPACITOR	F50V 0.022μF-Z

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
C 5C0	154P331070	CHIP CAPACITOR	CH50V 18pF-J
C 5C1	154P331070	CHIP CAPACITOR	CH50V 18pF-J
C 5C2	154P331010	CHIP CAPACITOR	CH50V 10pF-C
C 5C3	154P331010	CHIP CAPACITOR	CH50V 10pF-C
C 5C5	141P132010	CHIP CAPACITOR	B50V 0.01µF-K
C 5C7	141P133090	CHIP CAPACITOR	F50V 0.022µF-Z
C 5C9	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 5D5	141P139030	CHIP CAPACITOR	B25V 0.1µF-K
C 5D6	141P139030	CHIP CAPACITOR	B25V 0.1µF-K
C 5D7	141P136030	CHIP CAPACITOR	F16V 1µF-Z
C 6011	154P326060	CHIP CAPACITOR	SL50V 1800pF-J
C 6013	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6015	154P323060	CHIP CAPACITOR	SL50V 100pF-J
C 6021	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6024	154P327020	CHIP CAPACITOR	SL50V 3300pF-J
C 6025	141P139030	CHIP CAPACITOR	B25V 0.1µF-K
C 6036	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6039	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6040	154P324000	CHIP CAPACITOR	SL50V 150pF-J
C 6041	154P321080	CHIP CAPACITOR	SL50V 18pF-J
C 6042	154P321080	CHIP CAPACITOR	SL50V 18pF-J
C 6043	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6046	154P322040	CHIP CAPACITOR	SL50V 33pF-J
C 6047	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 6048	154P322080	CHIP CAPACITOR	SL50V 47pF-J
C 6049	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6050	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6057	141P131010	CHIP CAPACITOR	B50V 1500pF-K
C 6102	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6103	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6104	154P320070	CHIP CAPACITOR	SL50V 5pF-C
C 6106	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 6107	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7A1	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7A2	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7A3	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7A4	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7A5	141P137040	CHIP CAPACITOR	B25V 0.022µF-K
C 7A8	154P321020	CHIP CAPACITOR	SL50V 10pF-C
C 7A9	154P321020	CHIP CAPACITOR	SL50V 10pF-C
C 7B3	154P320070	CHIP CAPACITOR	SL50V 5pF-C
C 7B4	154P320090	CHIP CAPACITOR	SL50V 7pF-C
C 7B8	141P137040	CHIP CAPACITOR	B25V 0.022µF-K
C 7C0	141P137040	CHIP CAPACITOR	B25V 0.022µF-K
C 7C2	154P320090	CHIP CAPACITOR	SL50V 7pF-C
C 7C6	154P321000	CHIP CAPACITOR	SL50V 8pF-C
C 7C7	154P320090	CHIP CAPACITOR	SL50V 7pF-C
C 7C8	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7D5	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7D8	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7E1	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7E2	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7E5	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7E7	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7E8	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7E9	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7F0	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z

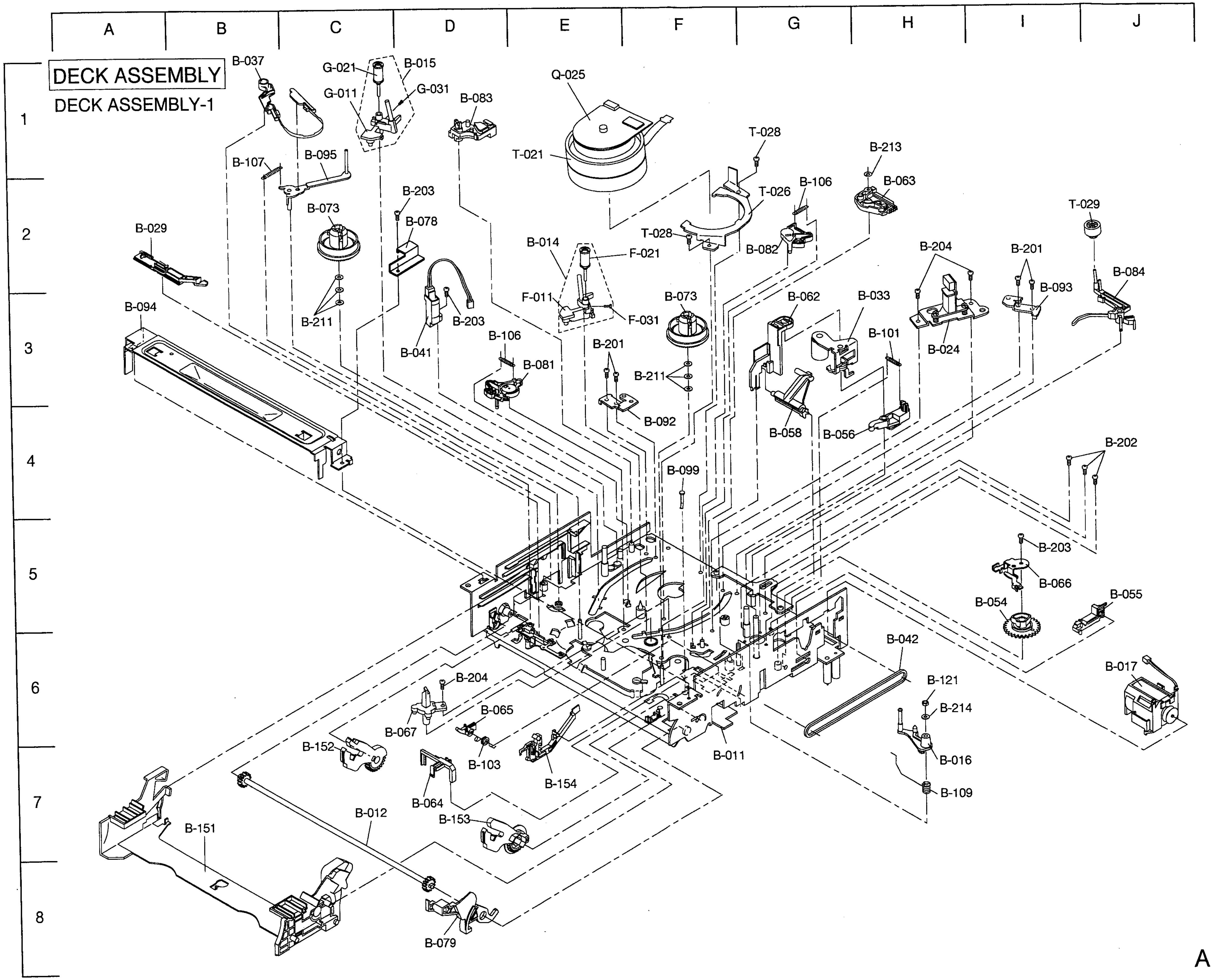
SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
C 7F9	154P320090	CHIP CAPACITOR	SL50V 7pF-C
C 7G8	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7G9	141P133080	CHIP CAPACITOR	F50V 0.01µF-Z
C 7H1	154P322000	CHIP CAPACITOR	SL50V 22pF-J
C 7H2	154P322000	CHIP CAPACITOR	SL50V 22pF-J
C 7H3	154P320040	CHIP CAPACITOR	SL50V 2pF-C
C 7H5	141P139030	CHIP CAPACITOR	B25V 0.1µF-K
C 7H6	141P139030	CHIP CAPACITOR	B25V 0.1µF-K
C 7H7	141P139030	CHIP CAPACITOR	B25V 0.1µF-K
C 7H8	154P324040	CHIP CAPACITOR	SL50V 220pF-J
C 7H9	154P324020	CHIP CAPACITOR	SL50V 180pF-J
C 7J0	154P324040	CHIP CAPACITOR	SL50V 220pF-J
C 7J1	154P323060	CHIP CAPACITOR	SL50V 100pF-J
C 7J2	154P324060	CHIP CAPACITOR	SL50V 270pF-J
C 901	189P153040	C-M-P-AC	AC250V 0.1µF-M
C 904	189P153040	C-M-P-AC	AC250V 0.1µF-M
C 909	189P094020	AC CERAMIC CAPACITOR	ACT4K E3300pF-M
	SWITCHES		
S 2A0	432P089040	KEY BOARD SWITCH	INITIAL RESET
S 701	432P089040	KEY BOARD SWITCH	EJECT
S 702	432P089040	KEY BOARD SWITCH	POWER
S 703	432P089020	KEY BOARD SWITCH	TRACKING (+)
S 704	432P089020	KEY BOARD SWITCH	POSITION/STILL ADJ (+)
S 705	432P089020	KEY BOARD SWITCH	LOCK
S 707	432P089020	KEY BOARD SWITCH	TRACKING (-)
S 708	432P089020	KEY BOARD SWITCH	POSITION/STILL ADJ (-)
S 709	431C079020	SLIDE SWITCH	COLOR B/W
S 801	432P089020	KEY BOARD SWITCH	PAUSE
S 802	432P089020	KEY BOARD SWITCH	TIMER REC
S 803	432P089020	KEY BOARD SWITCH	MODE (-)
S 804	432P089020	KEY BOARD SWITCH	COUNTER RESET
S 805	432P089020	KEY BOARD SWITCH	PB
S 806	432P089020	KEY BOARD SWITCH	SKIP/INDEX MEMORY
S 807	432P089020	KEY BOARD SWITCH	MODE (+)
S 808	432P089020	KEY BOARD SWITCH	DISPLAY
S 809	432P089040	KEY BOARD SWITCH	STOP
S 810	432P089040	KEY BOARD SWITCH	REC
S 8A1	439P023040	SWITCH	JOG/SHUTTLE
	MISCELLANEOUS		
B 5A0	286P004010	BUZZER	EFB-RD22C01
D 5A4	621C525010	LED HOLDER	
F 901	283D147040	FUSE	T2A
J 3A1	451C108030	RCA PIN JACK	
J 3A2	451C108030	RCA PIN JACK	
J 3A3	451C102010	MICROPHONE JACK	
J 7A1	440B128010	TERMINAL BOARD	
J 7A2	451C111010	JACK	
J 901	451C210010	POWER JACK	3P
JJ KJ	243C155020	CARD LEAD WIRE	9PIN L=100
K 7A0	287P045010	RELAY	RA5W-OH-K
M 572	288P180010	CAPSTAN MOTOR	F2QKB26
MA DA	243C193030	CARD LEAD WIRE	7PIN L=120
MD DD	243C193020	CARD LEAD WIRE	7P L=100
MR SR	243C159020	CARD LEAD WIRE	17P L=100

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION
MS SS	243C160020	CARD LEAD WIRE	19P L=100
PC901	268P079010	PHOTO COUPLER	PC123FY
Q 5A0	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5A0	621C526010	PHOTO HOLDER M	
Q 5A1	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5A2	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5A7	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5A7	621C527010	PHOTO HOLDER	
Q 5A8	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5A8	621C527010	PHOTO HOLDER	
Q 5A9	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5A9	621C564010	LED HOLDER R	
Q 5B0	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5B0	621C527010	PHOTO HOLDER	
Q 5C1	268P076010	PHOTO TRANSISTOR	SPS-1118C-T1
Q 5C1	621C564010	LED HOLDER R	
RV901	299P220020	SURGE SUPPRESSOR	DSS-302M
SA901	299P198010	SURGE ABSORBER	ERZV07D471
SA902	265P100040	VARISTOR	ERZV10D471CS
T 371	460P055050	FULL ERASE HEAD	
V 5A0	253P128010	FLUOR DISPLAY TUBE	25U39115TA
X 2A1	285P083010	CRYSTAL RESONATOR	4.43362MHz
X 2000	285P084010	CRYSTAL RESONATOR	17.7344MHz
X 5A0	285P054010	CRYSTAL RESONATOR	32.768kHz
X 5A1	285P235010	CRYSTAL RESONATOR	8.3886MHz
X 7A0	285P279010	CRYSTAL RESONATOR	16.384MHz
X 7A1	285P152010	CRYSTAL RESONATOR	19.069MHz
X 7A2	285P084010	CRYSTAL RESONATOR	17.7344MHz
X 7A3	285P106010	CRYSTAL RESONATOR	25.75MHz
	PRINTED CIRCUIT BOARD ASSY'S		
	928C916001	CCD SKEW PCB ASSY	
	925B034005	MAIN PCB ASSY	
	928D391001	OPE L PCB ASSY	
	928D392011	OPE R PCB ASSY	
	925B051002	POWER PCB ASSY	
	928C908004	TERMINAL PCB ASSY	
	925B073001	Y/C PCB ASSY	

SYMBOL No.	PARTS No.	PARTS NAME	DESCRIPTION

DECK ASSEMBLY

DECK ASSEMBLY-1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B-016
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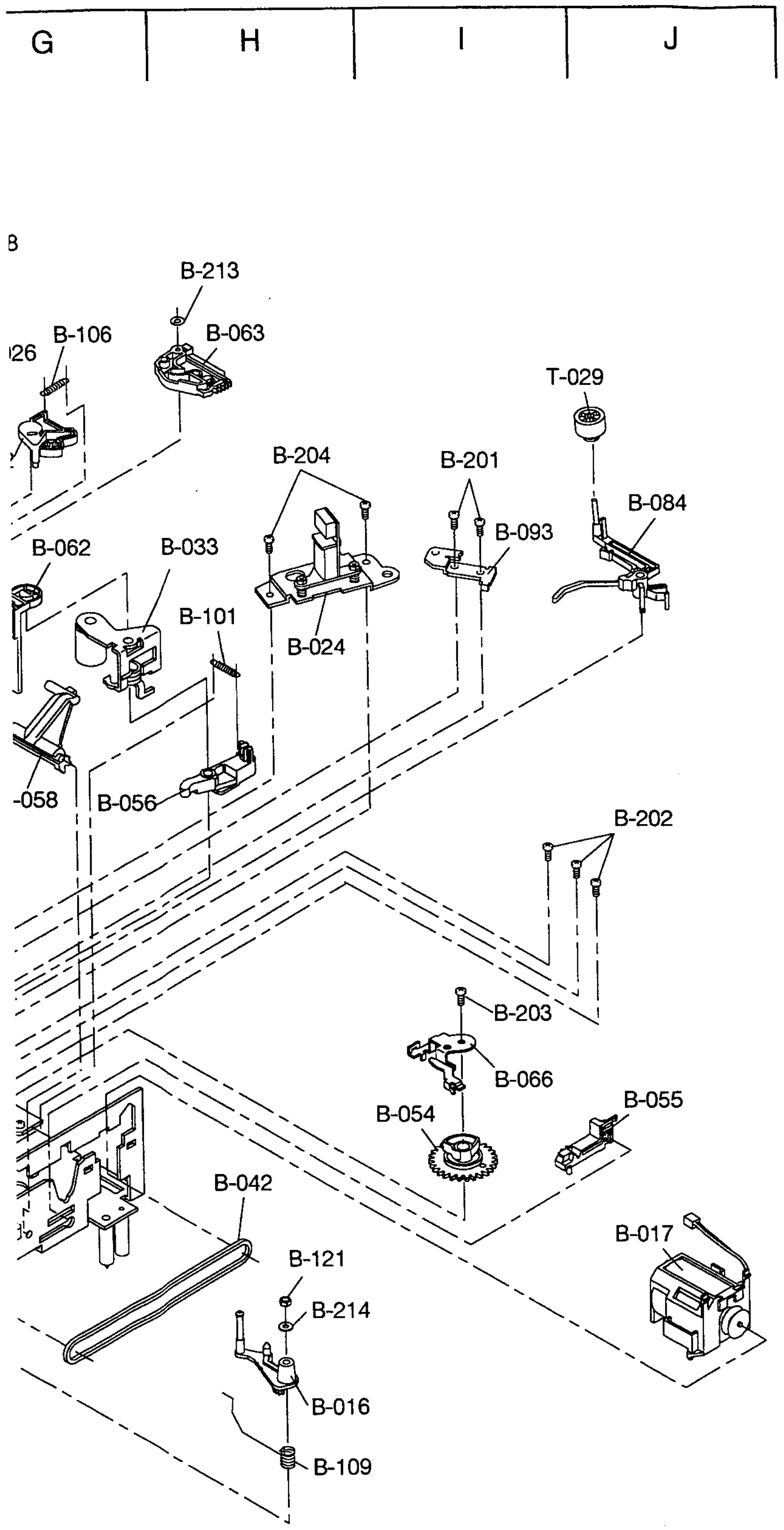
B-079

* Settled Service Parts

ITEM	PARTS NO.	*
B-011	948A194O02	
B-012	948C338O01	○
B-014	948D059O01	○
B-015	948D060O01	○
B-016	948D062O01	○
B-017	928D350O01	○
B-024	460D017O10	○
B-029	621C551O10	○
B-033	593C817O10	○
B-037	621C557O10	○
B-041	460P055O50	○
B-042	521D096O10	○
B-054	641B790O10	○
B-055	621C505O10	○
B-056	635C104O10	○
B-058	635C108O10	○
B-062	641B844O10	○
B-063	621C532O10	○
B-064	621C498O10	○
B-065	621C529O10	○
B-066	593C923O10	
B-067	621C486O10	○
B-073	641B788O20	○
B-078	597D572O10	
B-079	641B782O10	○
B-081	641B863O10	○
B-082	641B864O10	○
B-083	621C530O10	○
B-084	641B785O10	○
B-092	593C800O10	
B-093	593C801O10	
B-094	592B274O10	○
B-095	592B280O10	○
B-099	622D615O10	
B-101	572D844O10	○
B-103	572D858O10	○
B-106	572D839O10	○
B-107	572D840O10	○
B-109	572D843O10	○
B-121	674D081O20	○
B-151	515B001O20	○
B-152	515C001O30	○
B-153	515C001O40	○
B-154	621C533O10	○
B-201	669D224O10	
B-202	669D285O40	
B-203	669D224O30	
B-204	669D476O20	○
B-211	552C017O20	○
B-213	552C018O70	○
B-214	683D114O40	
F-011	948D083O01	
F-021	522B061O10	○
F-031	669D506O90	



* Settled Service Parts

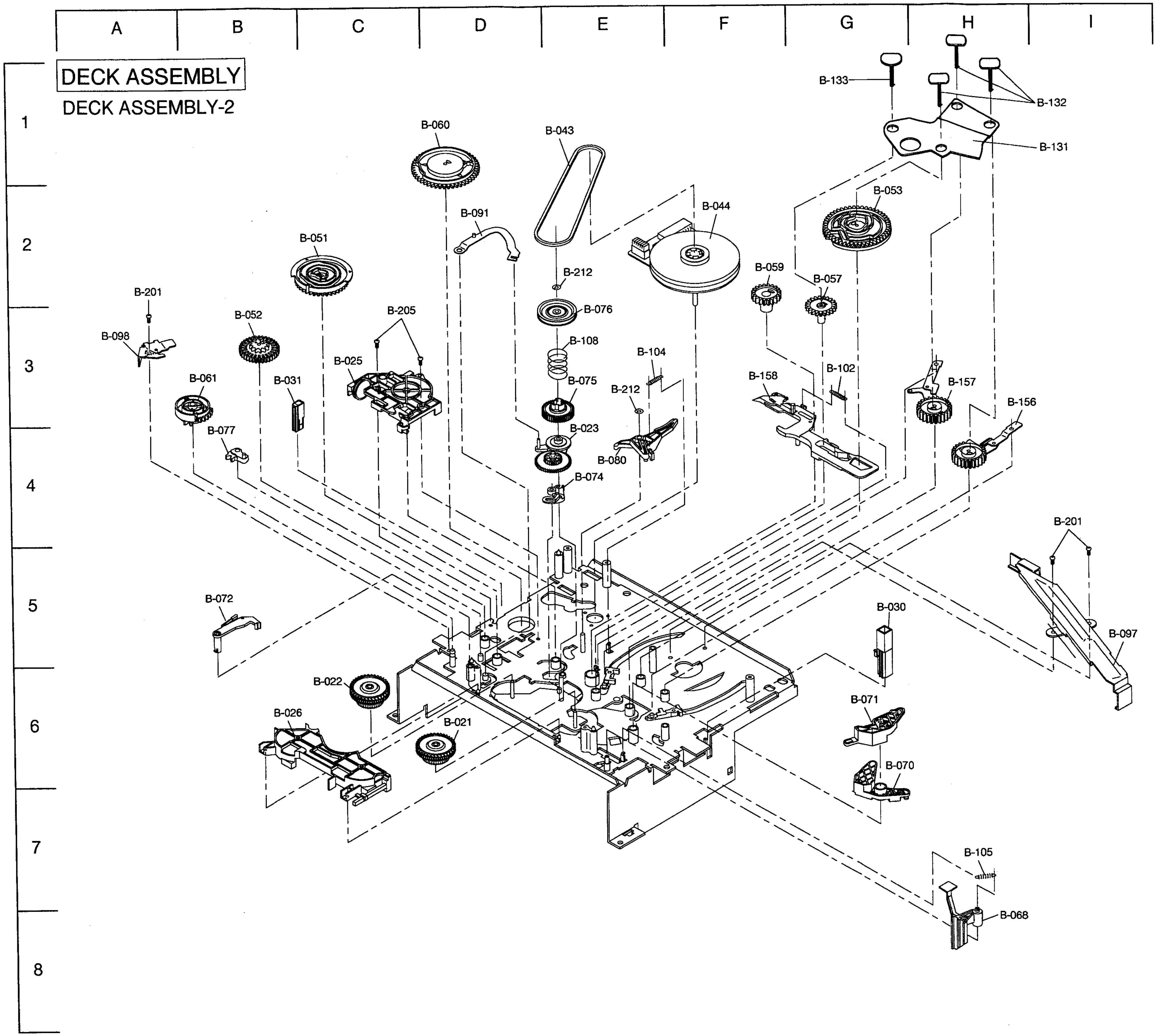
ITEM	PARTS NO.	*	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
B-011	948A194O02		F-7		MAIN PLATE ASSY		1
B-012	948C338O01	○	C-7		SYNC GEAR ASSY		1
B-014	948D059O01	○	E-2		TAPE GUIDE ASSY (TU)	TAKE UP	1
B-015	948D060O01	○	D-1		TAPE GUIDE ASSY (SP)	SUPPLY	1
B-016	948D062O01	○	H-7		GUIDE ARM ASSY (TU)		1
B-017	928D350O01	○	J-6		LOADING MOTOR ASSY		1
B-024	460D017O10	○	H-3		A/C HEAD UNIT		1
B-029	621C551O10	○	A-2		WIND LEVER UNIT		1
B-033	593C817O10	○	H-3		PINCH ARM UNIT		1
B-037	621C557O10	○	B-1		TENSION BELT UNIT		1
B-041	460P055O50	○	D-3		FE HEAD	(T371)	1
B-042	521D096O10	○	H-6		LOADING BELT		1
B-054	641B790O10	○	I-5		PINCH CAM GEAR		1
B-055	621C505O10	○	J-5		PINCH RACK SLIDER		1
B-056	635C104O10	○	G-4		PINCH CAM LEVER		1
B-058	635C108O10	○	G-4		PINCH GEAR ARM 2		1
B-062	641B844O10	○	G-3		PINCH ARM CAP 2		1
B-063	621C532O10	○	H-2		LOADING TG LEVER		1
B-064	621C498O10	○	D-7		MODE POSITION GUIDE		1
B-065	621C529O10	○	D-6		LOADING LOCK LEVER		1
B-066	593C923O10		I-5		PINCH CAM HOLDER		1
B-067	621C486O10	○	C-6		LAMP GUIDE		1
B-073	641B788O20	○	C-2	F-3	REEL DISK		2
B-078	597D572O10		D-2		LID HOLDER PLATE		1
B-079	641B782O10	○	D-8		F/L DOOR ARM		1
B-081	641B863O10	○	E-3		MAIN BRAKE (SP)2	SUPPLY	1
B-082	641B864O10	○	G-2		MAIN BRAKE (TU)2	TAKE UP	1
B-083	621C530O10	○	D-1		GUIDE ARM (SP)	SUPPLY	1
B-084	641B785O10	○	J-2		CLEANING ARM		1
B-092	593C800O10		F-4		GUIDE CATCHER (SP)		1
B-093	593C801O10		I-3		GUIDE CATCHER (TU)		1
B-094	592B274O10	○	A-3		STAY PLATE		1
B-095	592B280O10	○	C-1		TENSION ARM		1
B-099	622D615O10		F-4		SNAP PIN		1
B-101	572D844O10	○	H-3		PINCH CAM SPRING		1
B-103	572D858O10	○	D-7		LOADING LOCK SPRING		1
B-106	572D839O10	○	D-3	G-2	BRAKE SPRING		2
B-107	572D840O10	○	B-1		TENSION SPRING		1
B-109	572D843O10	○	H-7		GUIDE SPRING (TU)		1
B-121	674D081O20	○	H-6		NYLON NUT		1
B-151	515B001O20	○	B-7		BOTTOM UNIT		1
B-152	515C001O30	○	C-7		F/L ARM UNIT (SP)		1
B-153	515C001O40	○	D-7		F/L ARM UNIT (TU)		1
B-154	621C533O10	○	E-7		SHUT LEVER UNIT		1
B-201	669D224O10		E-3	I-2	SCREW	2.6 × 6	4
B-202	669D285O40		J-4		SCREW	M2.6 × 8	3
B-203	669D224O30		D-2 I-5	D-3	SCREW	2.6 × 10	3
B-204	669D476O20	○	H-2	D-6	SCREW	2.6 × 8	3
B-211	552C017O20	○	C-3	F-3	THRUST WASHER	2.5 × 4.7 × 0.13	6
B-213	552C018O70	○	H-1		CUT WASHER	2.1 × 5.0 × 0.5	1
B-214	683D114O40		H-6		SL WASHER	3.2 × 6.0 × 0.5	1
F-011	948D083O01		E-3		T/G ASSY (TU)	TAKE UP	1
F-021	522B061O10	○	F-2		GUIDE ROLLER (TU)		1
F-031	669D506O90		F-3		SCREW	M2 × 0.4 L=4	1

* Settled Service Parts

ITEM	PARTS NO.	*	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
G-011	948D082O01		C-1		T/G ASSY (SP)	SUPPLY	1
G-021	522B061O10	○	C-1		GUIDE ROLLER (SP)		1
G-031	669D506O90		D-1		SCREW	M2 × 0.4 L=4	1
Q-025	288P158O20	○	E-1		DRUM MOTOR	E20EL63	1
T-021	948B398O20	○	E-1		DRUM ASSY		1
T-026	592B345O10		G-2		DRUM CLAMPER		1
T-028	669D224O10		F-2	G-1	SCREW	2.6 × 6	2
T-029	622D598O10	○	I-2		CLEANING ROLLER UNIT		1

DECK ASSEMBLY

DECK ASSEMBLY-2


A
B
C
D
E
F
G
H
I
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4
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6
7
8
B-133
B-132
B-131
B-060
B-043
B-044
B-053
B-091
B-051
B-212
B-076
B-059
B-057
B-201
B-052
B-205
B-098
B-108
B-104
B-025
B-061
B-031
B-075
B-212
B-158
B-102
B-157
B-156
B-077
B-023
B-080
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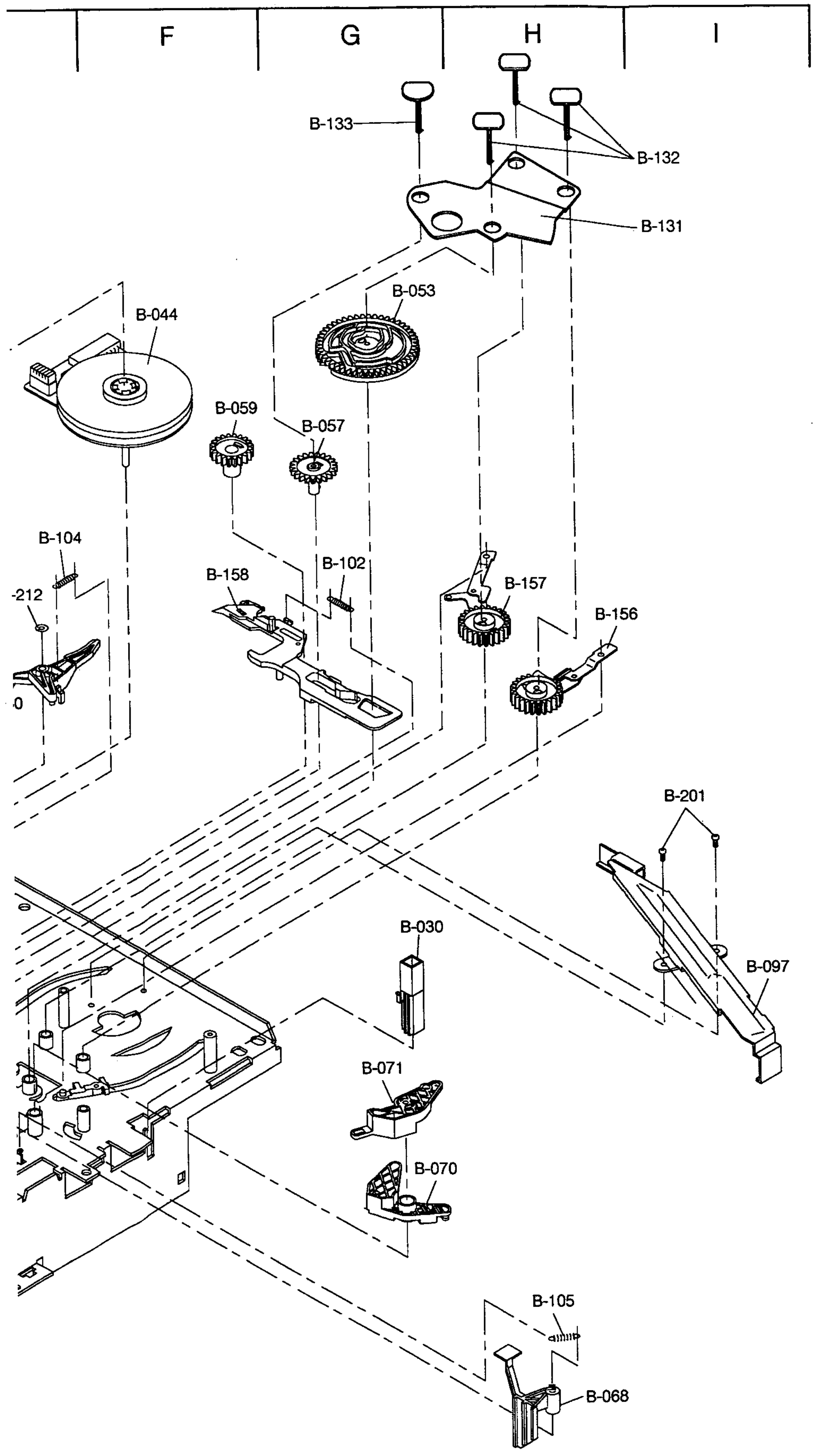
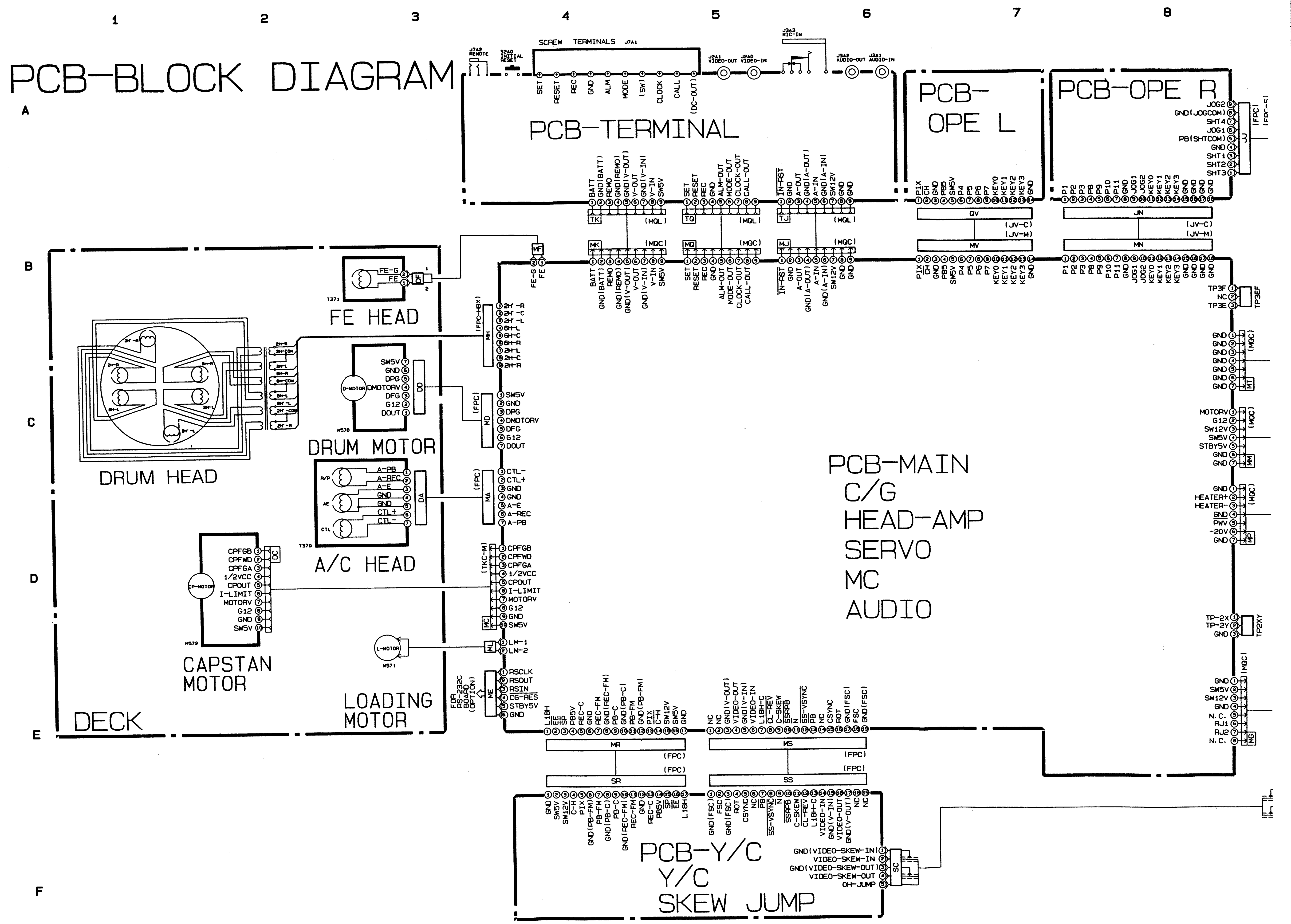
B-021
B-071
B-070
B-105
B-068

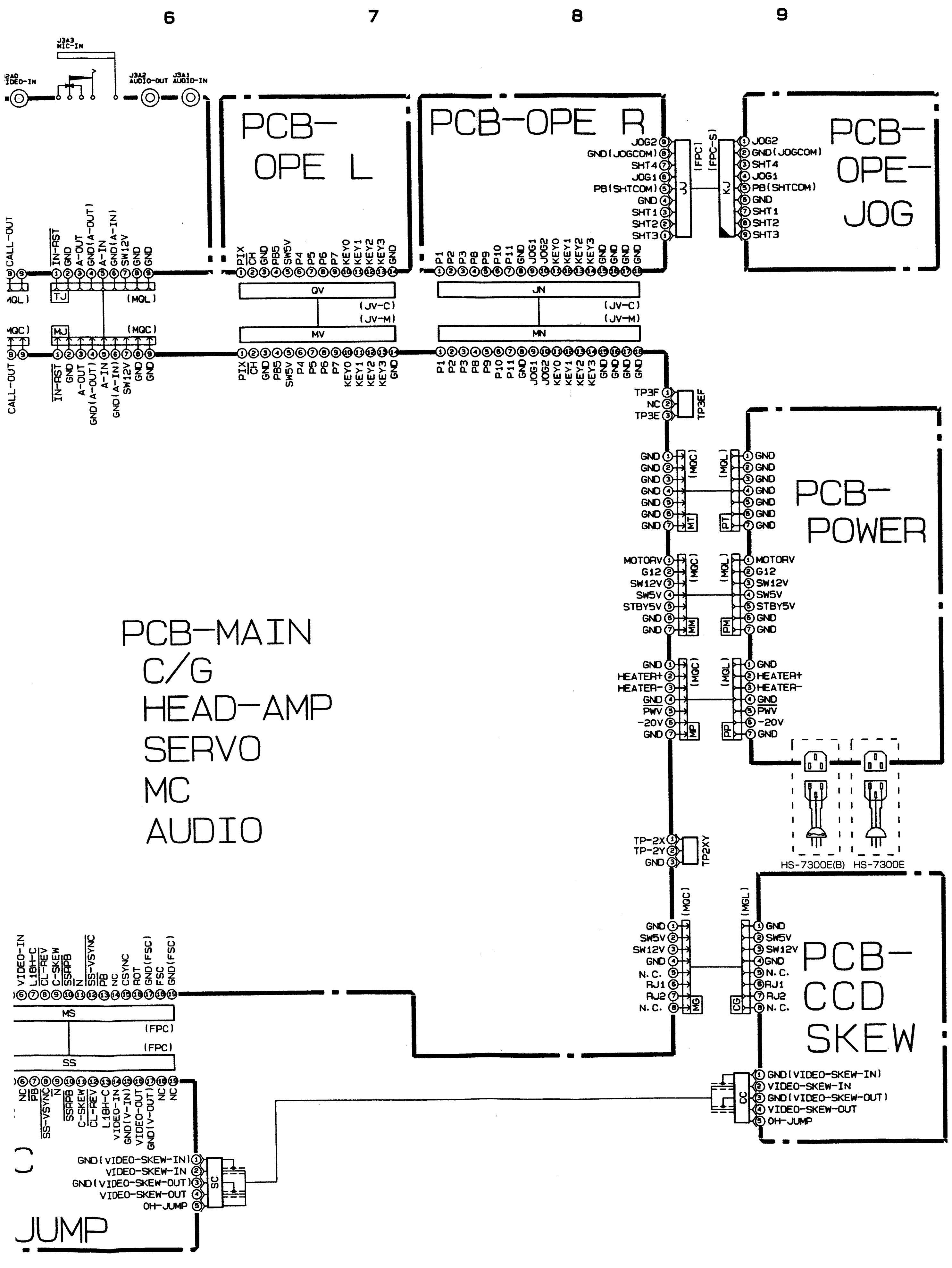


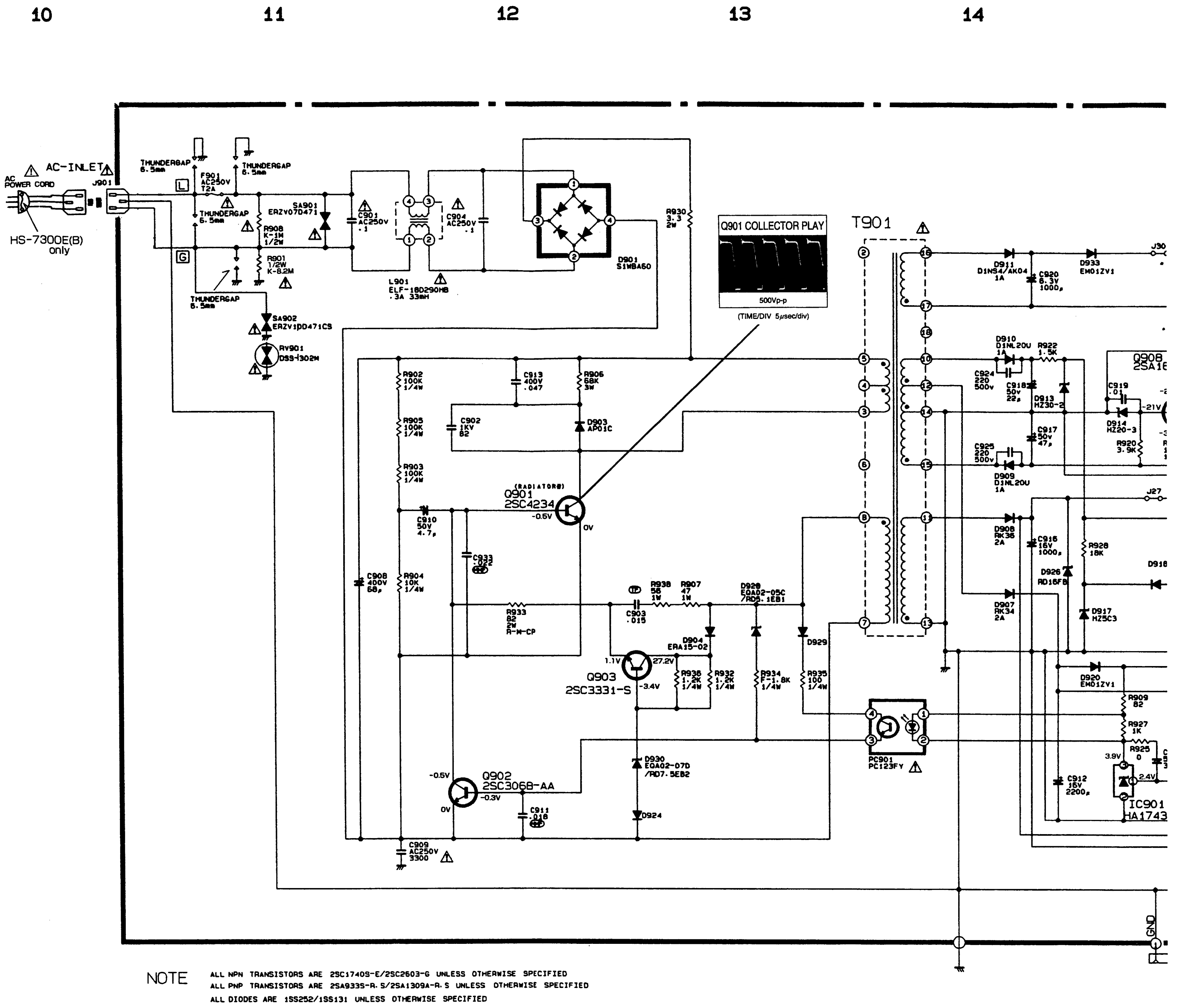
ITEM	PARTS NO.	*	ADDRESS		PARTS NAME	DESCRIPTION	Qt.
B-021	641B805O50	○	D-6		REEL GEAR UNIT (SP)	SUPPLY	1
B-022	641B805O60	○	C-6		REEL GEAR UNIT (TU)	TAKE UP	1
B-023	621C536O10	○	E-4		IDLER UNIT		1
B-025	621C538O20	○	C-3		WORM PULLEY UNIT		1
B-026	641B827O10	○	B-6		PHOTO UNIT		1
B-030	622D585O10	○	G-5		PHOTO GUIDE UNIT (SP)	SUPPLY	1
B-031	622D586O10	○	B-3		PHOTO GUIDE UNIT (TU)	TAKE UP	1
B-043	521D097O10	○	E-1		REEL BELT		1
B-044	288P180O10	○	F-2		CAPSTAN MOTOR	F2QKB26 (M572)	1
B-051	641B794O20	○	C-2		MODE GEAR		1
B-052	621C504O10	○	B-3		LOADING WORM GEAR		1
B-053	641B791O20	○	G-2		CAM GEAR (SP)	SUPPLY	1
B-057	621C503O20	○	G-2		LOADING GEAR		1
B-059	621C502O10	○	F-2		LAMP LOADING GEAR		1
B-060	641B792O10	○	D-1		CAM GEAR (TU)	TAKE UP	1
B-061	641B793O10	○	B-3		F/L DRIVE GEAR		1
B-068	641B817O10	○	H-8		REC LEVER		1
B-070	641B838O20	○	G-6		TENSION LEVER UNIT		1
B-071	621C508O10	○	G-6		CONTROL WIND LEVER		1
B-072	621C506O10	○	B-5		REEL LOCK LEVER		1
B-074	621C494O10	○	E-4		SHIFT LEVER		1
B-075	621C493O10	○	E-3		PULLEY GEAR		1
B-076	621C492O10	○	E-3		BELT PULLEY		1
B-077	635C106O10		B-4		F/L DRIVE LEVER		1
B-080	621C672O10	○	E-4		CAPSTAN BRAKE UNIT 2		1
B-091	593C799O10	○	D-2		IDLER CENTER LEVER		1
B-097	592B365O10		I-5		MAIN PLATE SUPPORT		1
B-098	593C903O10		A-3		MODE HOLDER		1
B-102	572D835O10	○	G-3		CAM SPRING (C)		1
B-104	572D962O10	○	E-3		CAPSTAN BRAKE SPRING 3		1
B-105	572D870O10	○	H-7		REC SPRING		1
B-108	572D865O10	○	E-3		SHIFT SPRING		1
B-131	594C063O10		I-1		PLATE LD		1
B-132	622D704O10		I-1		SNAP PIN LD		3
B-133	622D704O20		G-1		SNAP PIN LD		1
B-156	593C825O20	○	H-3		LOADING ARM UNIT (SP)	SUPPLY	1
B-157	593C826O20	○	H-3		LOADING ARM UNIT (TU)	TAKE UP	1
B-158	621C537O10	○	F-3		CAM PLATE UNIT (C)		1
B-201	669D224O10		A-2	I-4	SCREW	2.6 × 6	3
B-205	669D224O50		C-3		SCREW	2.6 × 14	2
B-212	552C018O10	○	E-2	E-3	CUT WASHER	2.5 × 6.0 × 0.5	2

PCB–BLOCK DIAGRAM



1
2
3
4
5
6
7
8
A
B
C
D
E
F
J7A2 REMOTE
S2A0 INITIAL RESET
SCREW TERMINALS J7A1
SET
RESET
REC
GND
ALM
MODE
(SW)
CLOCK
CALL
(DC-OUT)
J2A1 VIDEO-OUT
J2A0 VIDEO-IN
J3A3 MIC-IN
J3A2 AUDIO-OUT
J3A1 AUDIO-IN
PCB–TERMINAL
PCB–OPE L
PCB–OPE R
JOG2
GND(JOGCOM)
SHT4
JOG1
PB(SHTCOM)
GND
SHT1
SHT2
SHT3
JJ
(FPC)
TK
TQ
TJ
(MQL)
MK
MQ
MJ
(MQC)
BATT
GND(BATT)
REMO
GND(REMO)
GND(V-OUT)
V-OUT
GND(V-IN)
V-IN
SW5V
CLOCK-OUT
CALL-OUT
ALM-OUT
MODE-OUT
IN-RST
A-OUT
GND(A-OUT)
A-IN
GND(A-IN)
SW12V
PIX
CH
PB5
P4
P5
P6
P7
KEY0
KEY1
KEY2
KEY3
QV
MV
(JV-C)
(JV-M)
P1
P2
P3
P8
P9
P10
P11
JOG1
JOG2
JN
MN
MF
FE-G
FE
DF
T371
FE HEAD
TP3F
NC
TP3E
TP3EF
(FPC-HBX)
MH
2H'-R
2H'-C
2H'-L
6H-L
6H-C
6H-R
2H-L
2H-C
2H-R
2H-R
2H-COM
2H-L
6H-R
6H-COM
6H-L
2H'-L
2H'-COM
2H'-R
DRUM HEAD
D-MOTOR
SW5V
GND
DPG
DMOTORV
DFG
G12
DOUT
DD
M570
DRUM MOTOR
(FPC)
MD
R/P
AE
CTL
A-PB
A-REC
A-E
GND
CTL+
CTL-
DA
T370
A/C HEAD
MA
CP-MOTOR
CPFGB
CPFWD
CPFGA
1/2VCC
CPOUT
I-LIMIT
MOTORV
DC
M572
CAPSTAN MOTOR
(TKC-M)
MC
L-MOTOR
M571
ML
LM-1
LM-2
LOADING MOTOR
DECK
FOR RS-232C BOARD (OPTION)
ME
RSCLK
RSOUT
RSIN
CG-RES
STBY5V
MT
MOTORV
G12
SW12V
SW5V
STBY5V
MM
HEATER+
HEATER-
PWV
-20V
MP
TP-2X
TP-2Y
TP2XY
N.C.
RJ1
RJ2
MG
PCB–MAIN
C/G
HEAD–AMP
SERVO
MC
AUDIO
L18H
EE
SP
PB5V
REC-C
REC-FM
GND(REC-FM)
PB-C
GND(PB-C)
PB-FM
GND(PB-FM)
C-H
MR
SR
NC
GND(V-OUT)
VIDEO-OUT
GND(V-IN)
VIDEO-IN
L18H-C
CL-REV
C-SKEW
SSRPB
SS-VSYNC
PB
CSYNC
ROT
GND(FSC)
FSC
MS
SS
PCB–Y/C
Y/C
SKEW JUMP
GND(VIDEO-SKEW-IN)
VIDEO-SKEW-IN
GND(VIDEO-SKEW-OUT)
VIDEO-SKEW-OUT
OH-JUMP
SC


6
7
8
9
J3A3 MIC-IN
J3A2 AUDIO-OUT
J3A1 AUDIO-IN
PCB-OPE L
PCB-OPE R
PCB-OPE-JOG
JOG2
GND(JOGCOM)
SHT4
JOG1
PB(SHTCOM)
GND
SHT1
SHT2
SHT3
(FPC-S)
KJ
JJ
CALL-OUT
IN-RST
GND
A-OUT
GND(A-OUT)
A-IN
GND(A-IN)
SW12V
(MQL)
(MQC)
TJ
MJ
QV
MV
JN
MN
(JV-C)
(JV-M)
PIX
CH
PB5
SW5V
P4
P5
P6
P7
KEY0
KEY1
KEY2
KEY3
P1
P2
P3
P8
P9
P10
P11
JOG1
JOG2
TP3F
NC
TP3E
TP3EF
PCB-POWER
MT
PT
MOTORV
G12
STBY5V
MM
PM
HEATER+
HEATER-
PWV
-20V
MP
PP
HS-7300E(B)
HS-7300E
TP-2X
TP-2Y
TP2XY
PCB-MAIN
C/G
HEAD-AMP
SERVO
MC
AUDIO
VIDEO-IN
L18H-C
CL-REV
C-SKEW
SSRPB
IN
SS-VSYNC
PB
NC
CSYNC
ROT
GND(FSC)
FSC
MS
(FPC)
SS
GND(V-IN)
VIDEO-OUT
GND(V-OUT)
PCB-CCD SKEW
MG
CG
N.C.
RJ1
RJ2
CC
GND(VIDEO-SKEW-IN)
VIDEO-SKEW-IN
GND(VIDEO-SKEW-OUT)
VIDEO-SKEW-OUT
OH-JUMP
SC
JUMP


10
11
12
13
14
AC-INLET
AC POWER CORD
J901
HS-7300E(B) only
THUNDERGAP 6.5mm
F901 AC250V T2A
SA901 ERZV07D471
R908 K-1M 1/2W
R901 1/2W K-8.2M
C901 AC250V .1
C904 AC250V .1
L901 ELF-18D290HB -3A 33mH
D901 S1WBA60
SA902 ERZV10D471CS
RV901 DSS-1302M
R930 3.3 2W
Q901 COLLECTOR PLAY
500Vp-p
(TIME/DIV 5μsec/div)
T901
R902 100K 1/4W
R905 100K 1/4W
R903 100K 1/4W
C913 400V .047
R906 68K 3W
C902 1KV 82
D903 AP01C
Q901 2SC4234
-0.5V
0V
C910 50V 4.7μ
C933 .022
C908 400V 56μ
R904 10K 1/4W
R933 82 2W R-M-CP
R938 56 1W
R907 47 1W
C903 .015
D928 EGA02-05C /RD5.1EB1
D904 ERA15-02
Q903 2SC3331-S
1.1V
27.2V
-3.4V
R936 1.2K 1/4W
R932 1.2K 1/4W
R934 F-1.8K 1/4W
R935 100 1/4W
D929
D930 EGA02-07D /RD7.5EB2
Q902 2SC3068-AA
-0.3V
C911 .018
D924
C909 AC250V 3300
D911 D1NS4/AK04 1A
C920 6.3V 1000μ
D933 EM01ZV1
D910 D1NL20U 1A
R922 1.5K
C924 220 500v
C918 50v 22μ
D912 HZ30-2
C925 220 500v
C917 50v 47μ
D909 D1NL20U 1A
Q908 2SA1
C919 .01
D914 HZ20-3
R920 3.9K
-21V
D908 RK36 2A
C916 16V 1000μ
R928 18K
D926 RD18FB
D907 RK34 2A
D917 HZ5C3
D918
D920 EM01ZV1
R909 82
R927 1K
R925
3.9V
2.4V
PC901 PC123FY
C912 16V 2200μ
IC901 HA1743
J27
GND

NOTE ALL NPN TRANSISTORS ARE 2SC1740S-E/2SC2603-G UNLESS OTHERWISE SPECIFIED
ALL PNP TRANSISTORS ARE 2SA933S-R. S/2SA1309A-R. S UNLESS OTHERWISE SPECIFIED
ALL DIODES ARE 1SS252/1SS131 UNLESS OTHERWISE SPECIFIED

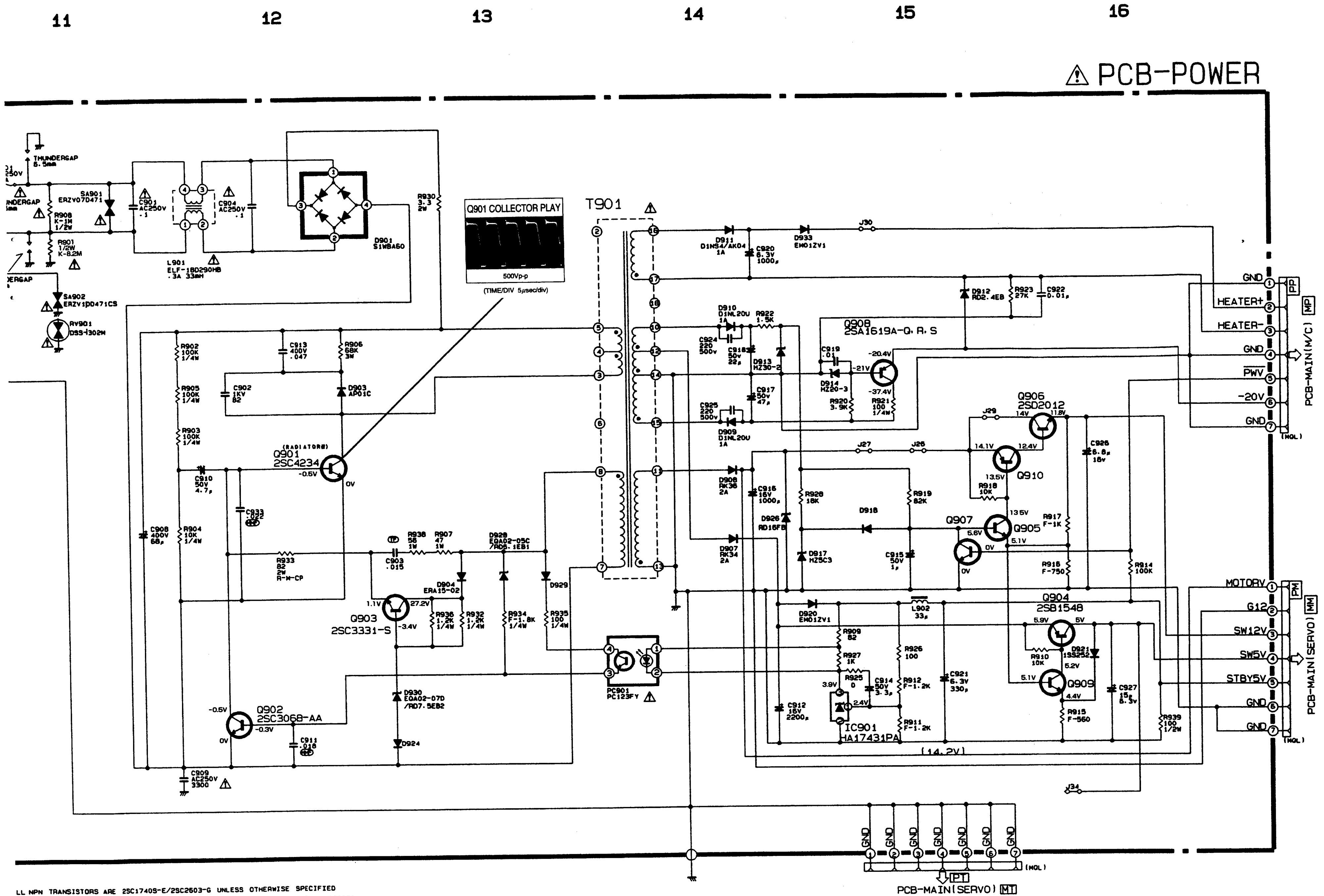
⚠
SERVICING PRECAUTION

SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THEREFOR REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS.

DON'T DEGRADE THE SAFETY OF THE VCR THROUGH IMPROPER SERVICING.

CONTENTS	
①	PCB-BLOCK DIAGRAM PCB-POWER
②	PCB-MAIN (HEAD-AMP) (AUDIO) PCB-TERMINAL
③	PCB-Y/C (Y/C)
④	PCB-MAIN (MC)

⑤	PCB-MAIN (SERVO) (C/G) PCB-OPE PCB-OPE PCB-OPE-
⑥	PCB-CCD PCB-Y/C (SKEW J
⑦ | ⑨	PRINTED BOARD P LAYOUT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12
13
14
15
16
⚠ PCB-POWER
THUNDERGAP 6.5mm
SA901 ERZV07D471
R908 K-1M 1/2W
C901 AC250V .1
C904 AC250V .1
L901 ELF-18D290HB .3A 33mH
D901 S1WBA60
R901 1/2W K-8.2M
SA902 ERZV10D471CS
RV901 DSS-302M
R930 3.3 2W
Q901 COLLECTOR PLAY
500Vp-p
(TIME/DIV 5μsec/div)
T901
R902 100K 1/4W
C913 400V .047
R906 68K 3W
R905 100K 1/4W
C902 1KV 82
D903 AP01C
R903 100K 1/4W
(RADIATOR⊕)
Q901 2SC4234
-0.5V
0V
C910 50V 4.7μ
C933 .022
C908 400V 68μ
R904 10K 1/4W
R933 82 2W R-N-CP
R938 56 1W
R907 47 1W
C903 .015
D928 EQA02-05C /RD5.1EB1
D904 ERA15-02
D929
Q903 2SC3331-S
1.1V
27.2V
-3.4V
R936 1.2K 1/4W
R932 1.2K 1/4W
R934 F-1.8K 1/4W
R935 100 1/4W
PC901 PC123FY
D930 EQA02-07D /RD7.5EB2
D924
Q902 2SC3068-AA
-0.5V
-0.3V
0V
C911 .018
C909 AC250V 3300
D911 D1NS4/AK04 1A
C920 6.3V 1000μ
D933 EM01ZV1
J30
D912 RD2.4EB
R923 27K
C922 0.01μ
D910 D1NL20U 1A
R922 1.5K
C924 220 500V
C918 50V 22μ
D913 HZ30-2
Q908 2SA1619A-Q.R.S
C919 .01
D914 HZ20-3
-21V
-20.4V
-37.4V
R920 3.9K
R921 100 1/4W
C917 50V 47μ
C925 220 500V
D909 D1NL20U 1A
J29
Q906 2SD2012
14V
11.8V
J27
J26
14.1V
12.4V
Q910
13.5V
R918 10K
C926 6.8μ 16V
D908 RK36 2A
C916 16V 1000μ
R928 18K
R919 82K
D926 RD16FB
D918
Q907
5.6V
Q905
R917 F-1K
5.1V
0V
D907 RK34 2A
D917 HZ5C3
C915 50V 1μ
R916 F-750
R914 100K
D920 EM01ZV1
L902 33μ
Q904 2SB1548
5.9V
5V
R909 82
R926 100
R910 10K
D921 1SS252
5.2V
R927 1K
R925 0
C914 50V 3.3μ
R912 F-1.2K
C921 6.3V 330μ
Q909
4.4V
C927 15μ 6.3V
3.9V
2.4V
C912 16V 2200μ
IC901 HA17431PA
R911 F-1.2K
R915 F-560
R939 100 1/2W
(14.2V)
J34
GND
HEATER+
HEATER-
GND
PWV
-20V
GND
PP
MP
PCB-MAIN(M/C)
(HOL)
MOTORV
G12
SW12V
SW5V
STBY5V
GND
GND
PM
MM
PCB-MAIN(SERVO)
(HOL)
GND
GND
GND
GND
GND
GND
GND
PT
PCB-MAIN(SERVO) MT

LL NPN TRANSISTORS ARE 2SC1740S-E/2SC2603-G UNLESS OTHERWISE SPECIFIED
LL PNP TRANSISTORS ARE 2SA933S-R.S/2SA1309A-R.S UNLESS OTHERWISE SPECIFIED
LL DIODES ARE 1SS252/1SS131 UNLESS OTHERWISE SPECIFIED

CING PRECAUTION

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:ACTERISTICS IMPORTANT TO SAFETY AND PER-
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OPER SERVICING.

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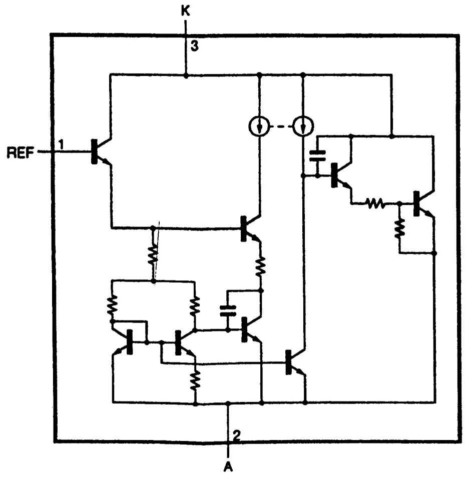
③	PCB-Y/C (Y/C)
④	PCB-MAIN (MC)
⑤	PCB-MAIN (SERVO) (C/G) PCB-OPE L PCB-OPE R PCB-OPE-JOG
⑥	PCB-CCD SKEW PCB-Y/C (SKEW JUMP)
⑦ | ⑨	PRINTED CIRCUIT BOARD PARTS LAYOUT

IC901 HA17431PA



SCHEMATIC DIAGRAM

• NOTE

1. Each voltage should be within ±20% of the DC voltages measured with a digital voltmeter.
2. The voltages parenthesised are on SP recording mode. While those without parenthesised on SP play back mode.
3. Waveforme were taken with standard colour bar signal.
4. TP6A, etc. show Test Points.

5. Capacitors

Value	Not indicated [PF, for numbers more than 1 μF, for numbers less than 1		
Dielectric Strength	Not indicated :50V		
Tolerance	Not indicated =±10% [No Tolerance is indicated for electrolytic capacitors and ±20%] G=±2% P=+100% −0% Q=+30% −10% C=±0.25PF J =±5% D=±0.5PF K=±10% Z=+80% −20% T=+200% −0% F=±1PF M=±20% G=±2PF		
Sort	I	Parts except for chips	Not indicated : Ceramic capacitor MF : Polyester capacitor PP : Polypropylene film capacitor ALM : Aluminus electrolytic capacitor TF : Twin film capacitor SC : Semiconductor ceramic capacitor MP : Metalized paper MPP : Metalized plastic film capacitor MMF : Metalized polyester capacitor MF.PP : Polyester polypropylene film capacitor PS : Styrol capacitor TAN or TANT : Tantalum capacitor —⊣⊢— : Electrolytic capacitor BP or NP : Non polarized electrolytic capacitor
	II	Chips	Not indicated : Ceramic capacitor chip —⊣⊢— : Electrolytic capacitor BP or NP : Non polarized electrolytic capacitor chip
Characteristic (only ceramic capacitor)	Not indicated : F or B(high dielectric percentage) CH,SL,etc. : Temperature compensating types		

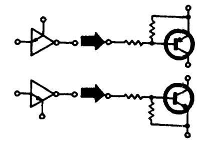
6. Resistors

Value	Not indicated = Ω K = kΩ(1000Ω) M = MΩ(1000kΩ)		
Wattage	Parts except for chips	Not indicated = 1/4W or 1/6W	
	Chips	Not indicated = 1/10W	
Tolerance	Not indicated =±5% D=±0.5% J=±5% F=±1% K=±10%		
Sort	I	Parts except for chips	Not indicated : Carbon resistor S : Fixed composition resistor MB : Metal oxide film resistor(type B) CE : Cemented resistor W : Wire wound resistor M : Metal film resistor MPC : Metal plate cement resistor ML : Metal liner resistor
	II	Chip	Not indicated : Chip resistor

7. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

SPECIFIC SYMBOL

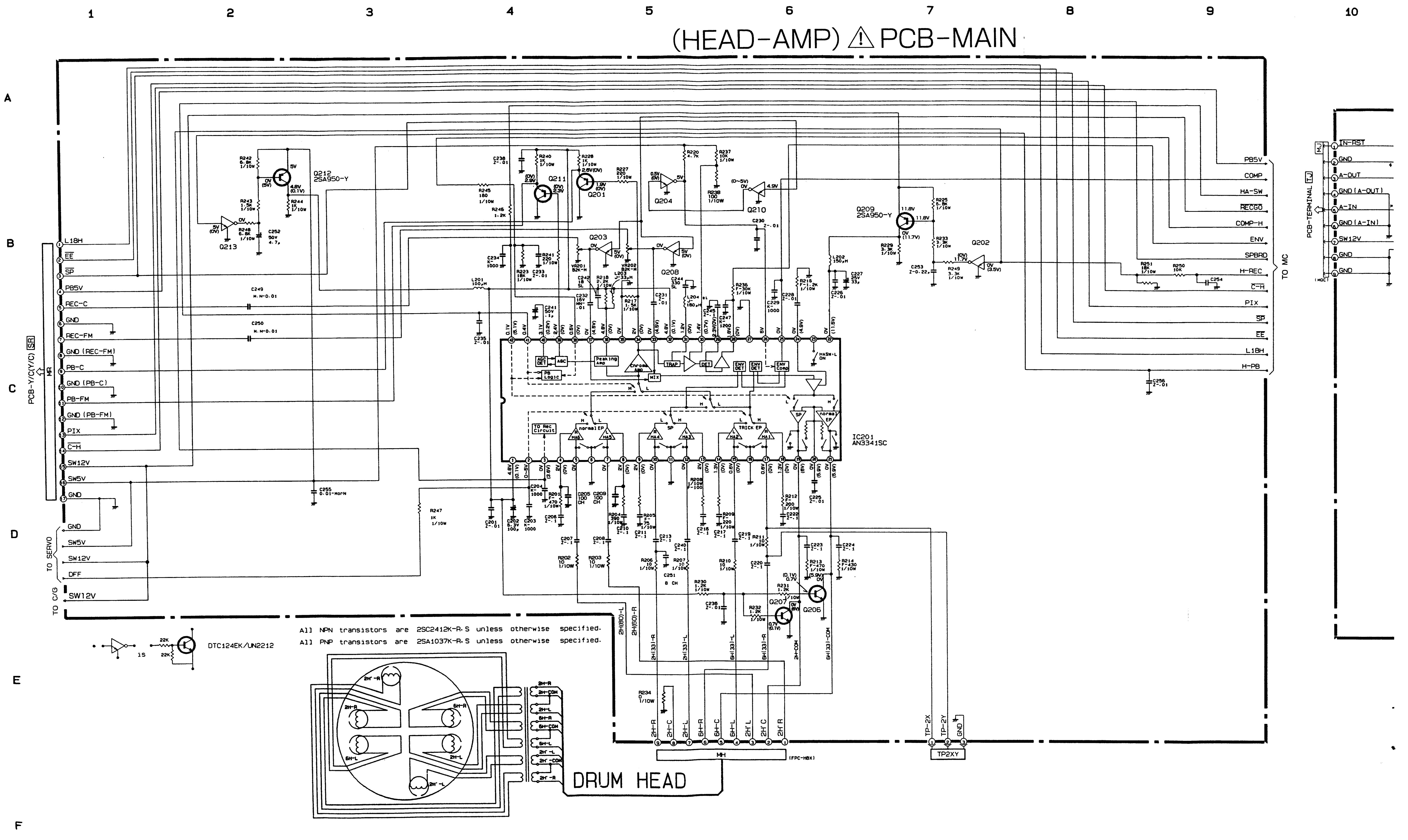
Zener Diode	Crystal unit
Varicap	LE Diode
Thermistor	Photo Diode
Fusible Resistor	Ceramic filter



PNP DIGITAL TRANSISTOR

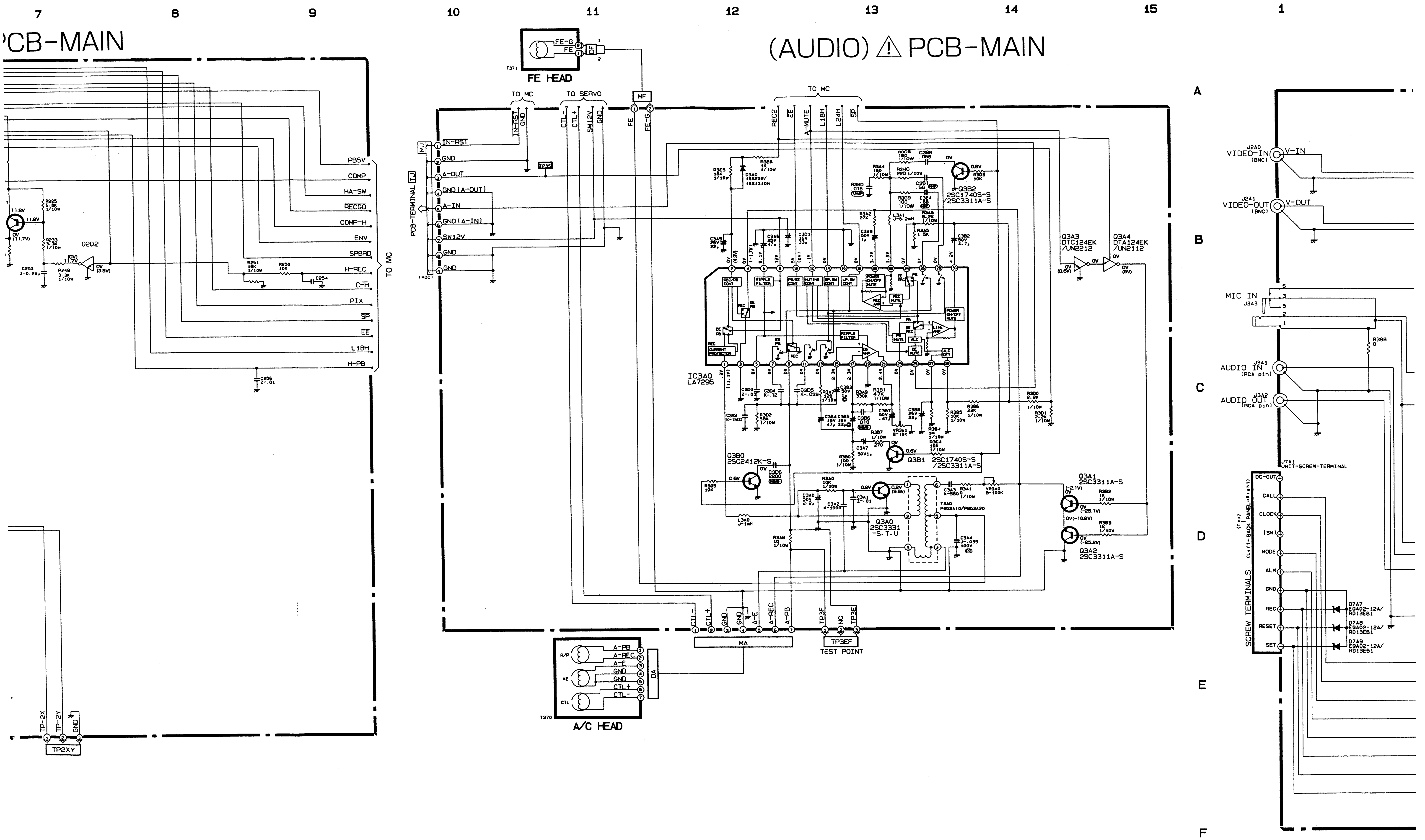
NPN DIGITAL TRANSISTOR

(HEAD-AMP) ⚠ PCB-MAIN

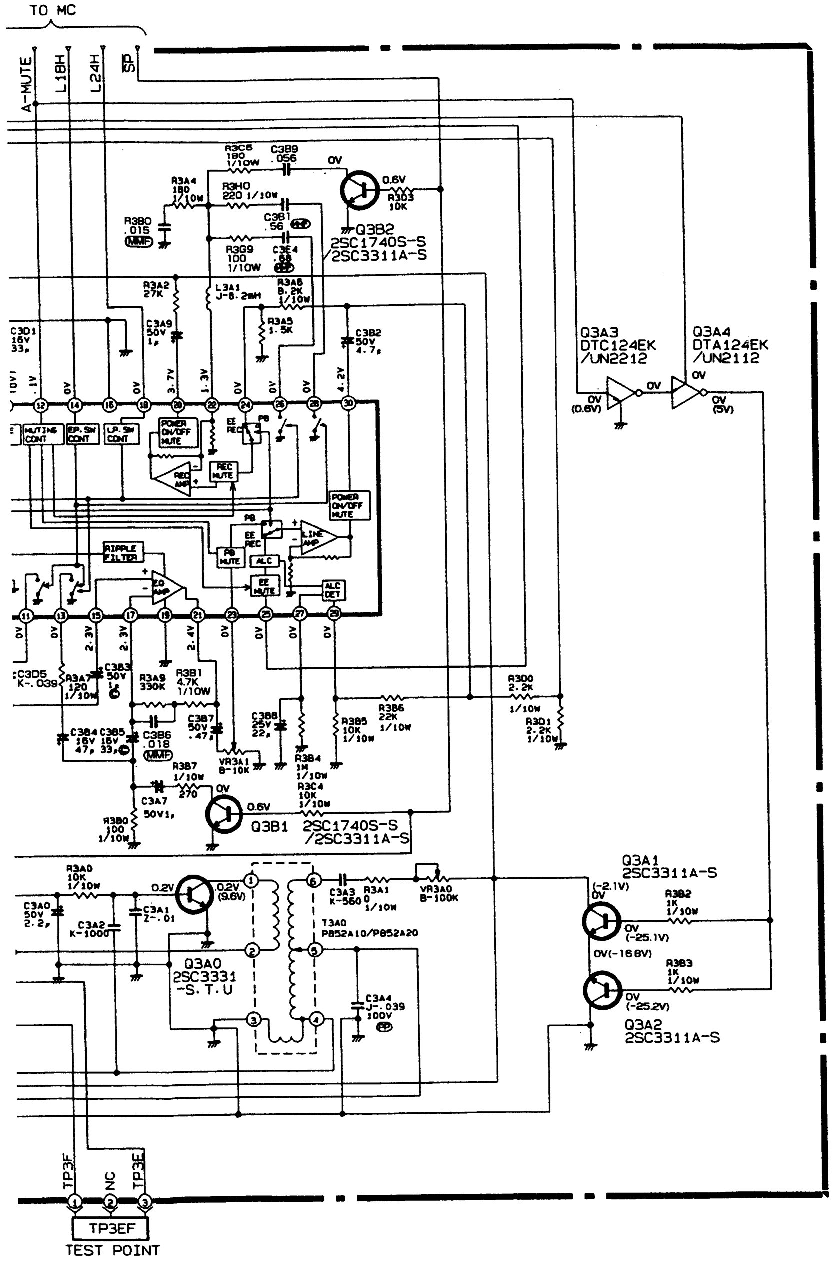

1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
PCB-Y/C(Y/C) SR
MR
L18H
EE
SP
PB5V
REC-C
GND
REC-FM
GND (REC-FM)
PB-C
GND (PB-C)
PB-FM
GND (PB-FM)
PIX
C-H
SW12V
SW5V
GND
TO SERVO
GND
SW5V
SW12V
DFF
TO C/G
SW12V
PB5V
COMP
HA-SW
RECGO
COMP-H
ENV
SPBRD
H-REC
C-H
PIX
SP
EE
L18H
H-PB
TO MC
PCB-TERMINAL TJ
MJ
IN-RST
GND
A-OUT
GND (A-OUT)
A-IN
GND (A-IN)
SW12V
GND
GND
Q212 2SA950-Y
Q213
Q211
Q201
Q204
Q210
Q203
Q208
Q209 2SA950-Y
Q202
Q207
Q206
IC201 AN3341SC
Peaking Amp
Chroma AGC
AGC DET
ABC
PB Logic
MIX
TRAP
DET
ENV DET
ENV COMP
TO Rec Circuit
normal EP
SP
TRICK EP
HASW-L ON
2H(80)-L
2H(60)-R
2H(33)-R
2H(33)-L
6H(33)-L
6H(33)-R
2H-COM
6H(33)-COM
2H-R
2H-C
2H-L
6H-R
6H-C
6H-L
2H'L
2H'C
2H'R
MH
(FPC-HBX)
TP-2X
TP-2Y
GND
TP2XY
DRUM HEAD
DTC124EK/UN2212
22K
22K
1S

All NPN transistors are 2SC2412K-R·S unless otherwise specified.
All PNP transistors are 2SA1037K-R·S unless otherwise specified.

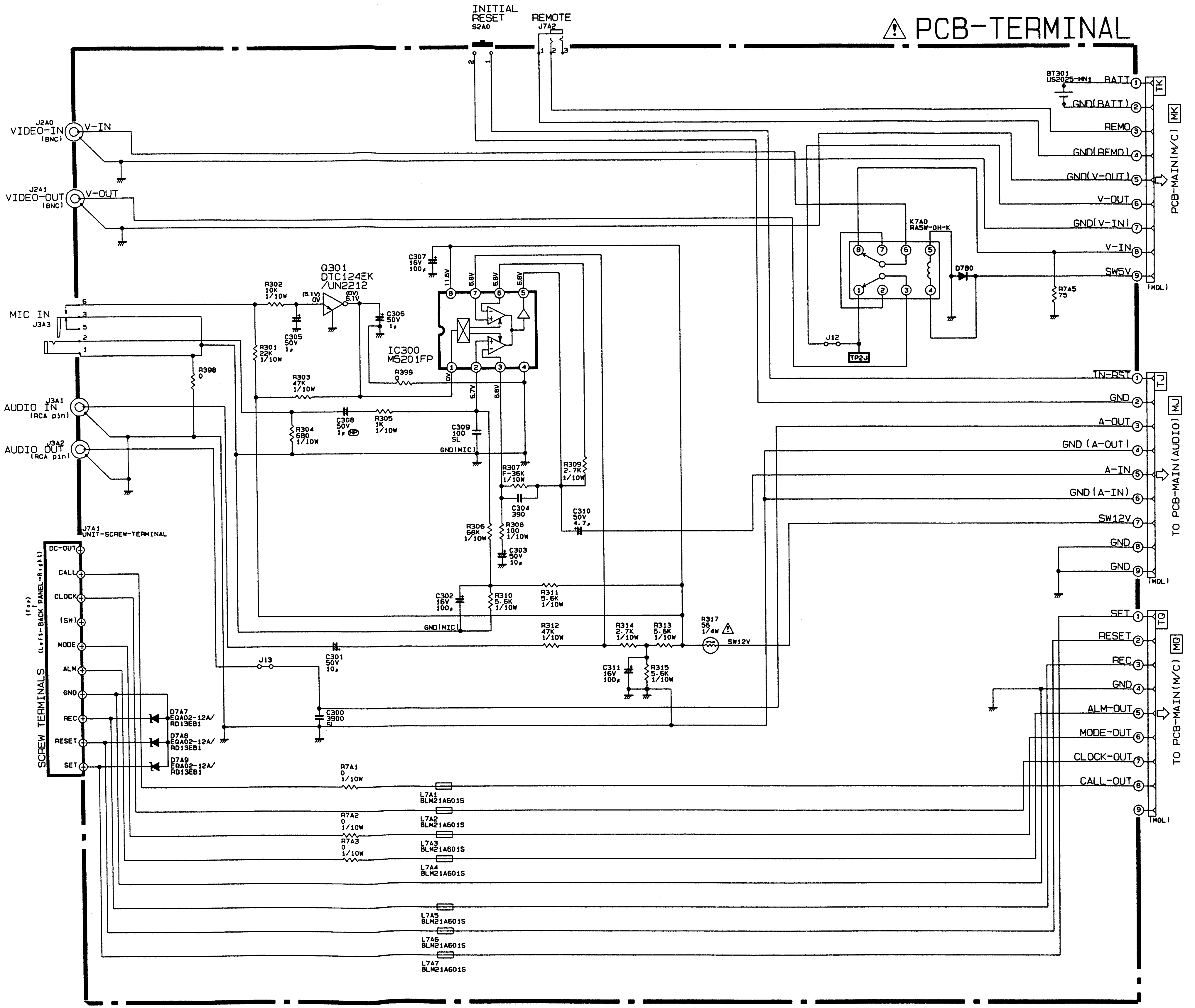
(AUDIO) ⚠ PCB-MAIN


7
8
9
10
11
12
13
14
15
1
A
B
C
D
E
F
CB-MAIN
FE HEAD
FE-G
FE
T371
MF
TO MC
TO SERVO
IN-RST
GND
CTL-
CTL+
SW12V
FE
FE-G
REC2
EE
A-MUTE
L18H
L24H
SP
PCB-TERMINAL
A-OUT
GND (A-OUT)
A-IN
GND (A-IN)
SW12V
PB5V
COMP
HA-SW
RECGO
COMP-H
ENV
SPBRD
H-REC
C-H
PIX
SP
EE
L18H
H-PB
TO MC
Q202
R225
R233
R249
R251
R250
C253
C254
C256
IC3A0
LA7295
REC/PB CONT
RIPPLE FILTER
PB/EE CONT
MUTING CONT
SP. SW CONT
LP. SW CONT
POWER ON/OFF MUTE
REC MUTE
REC AMP
LINE AMP
ALC
ALC DET
PB MUTE
EE MUTE
EQ AMP
REC CURRENT PROTECTOR
Q3B2
2SC1740S-S
/2SC3311A-S
Q3B0
2SC2412K-S
Q3B1
2SC1740S-S
/2SC3311A-S
Q3A0
2SC3331
-S.T.U
T3A0
P852A10/P852A20
Q3A3
DTC124EK
/UN2212
Q3A4
DTA124EK
/UN2112
Q3A1
2SC3311A-S
Q3A2
2SC3311A-S
D3A0
1SS252/
1SS133M
VR3A0
B-100K
VR3A1
B-10K
CTL-
CTL+
GND
A-E
A-REC
A-PB
TP3F
NC
TP3E
MA
TP3EF
TEST POINT
A-PB
A-REC
A-E
GND
GND
CTL+
CTL-
R/P
AE
CTL
DA
T370
A/C HEAD
TP-2X
TP-2Y
GND
TP2XY
J2A0
VIDEO-IN
(BNC)
V-IN
J2A1
VIDEO-OUT
(BNC)
V-OUT
MIC IN
J3A3
R398
J3A1
AUDIO IN
(RCA pin)
J3A2
AUDIO OUT
(RCA pin)
J7A1
UNIT-SCREW-TERMINAL
SCREW TERMINALS
(Left-BACK PANEL-Right)
DC-OUT
CALL
CLOCK
(SW)
MODE
ALM
GND
REC
RESET
SET
D7A7
D7A8
D7A9
EQA02-12A/
RD13EB1

UDIO) ⚠ PCB-MAIN

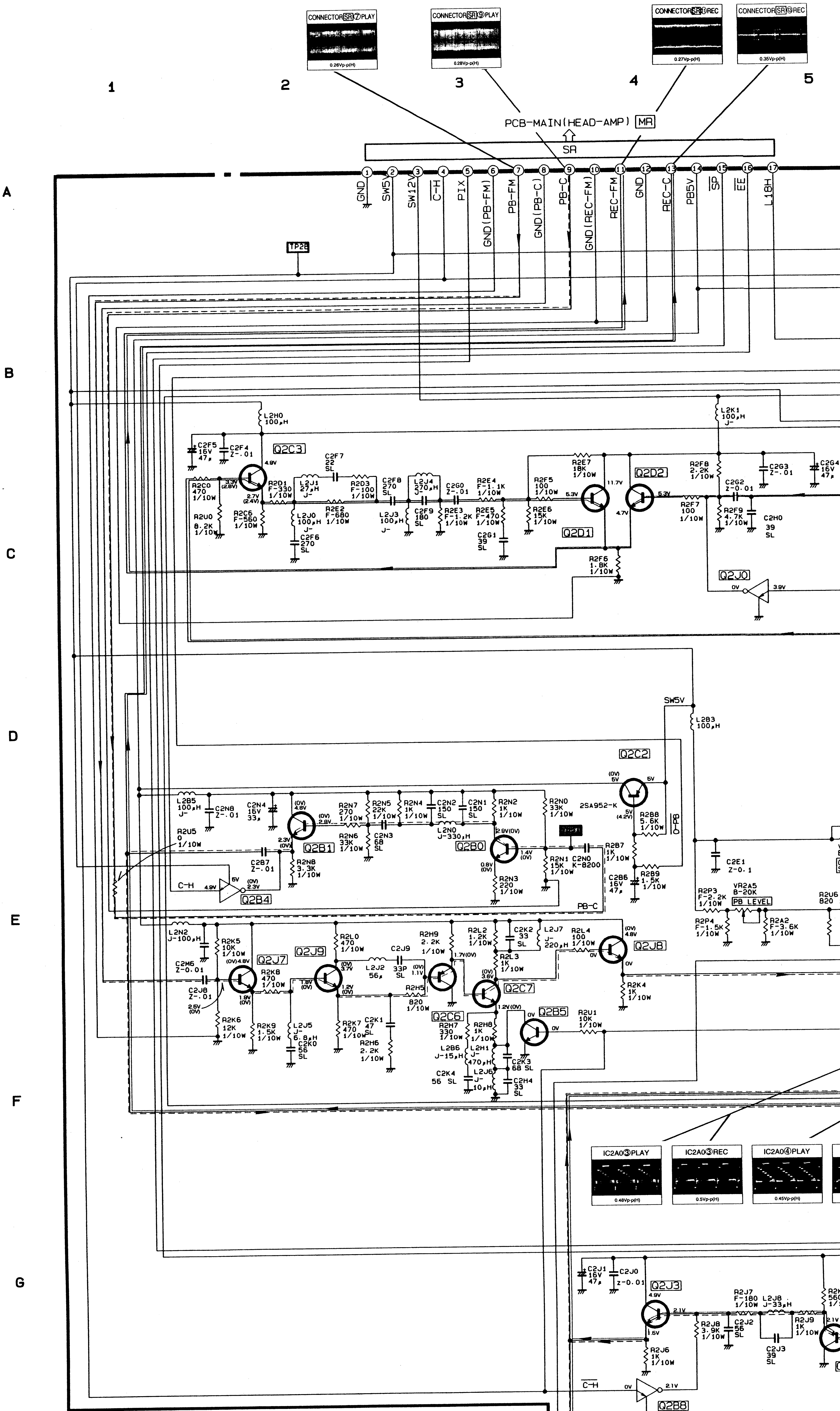

13
14
15
TO MC
A-MUTE
L18H
L24H
SP
Q3B2
2SC1740S-S
2SC3311A-S
Q3A3
DTC124EK
/UN2212
Q3A4
DTA124EK
/UN2112
RIPPLE FILTER
MUTING CONT
EP. SW CONT
LP. SW CONT
POWER ON/OFF MUTE
REC MUTE
ALC
LINE AMP
ALC DET
Q3B1
2SC1740S-S
/2SC3311A-S
Q3A0
2SC3331
-S.T.U
T3A0
P852A10/P852A20
Q3A1
2SC3311A-S
Q3A2
2SC3311A-S
VR3A0
B-100K
TP3F
NC
TP3E
TP3EF
TEST POINT

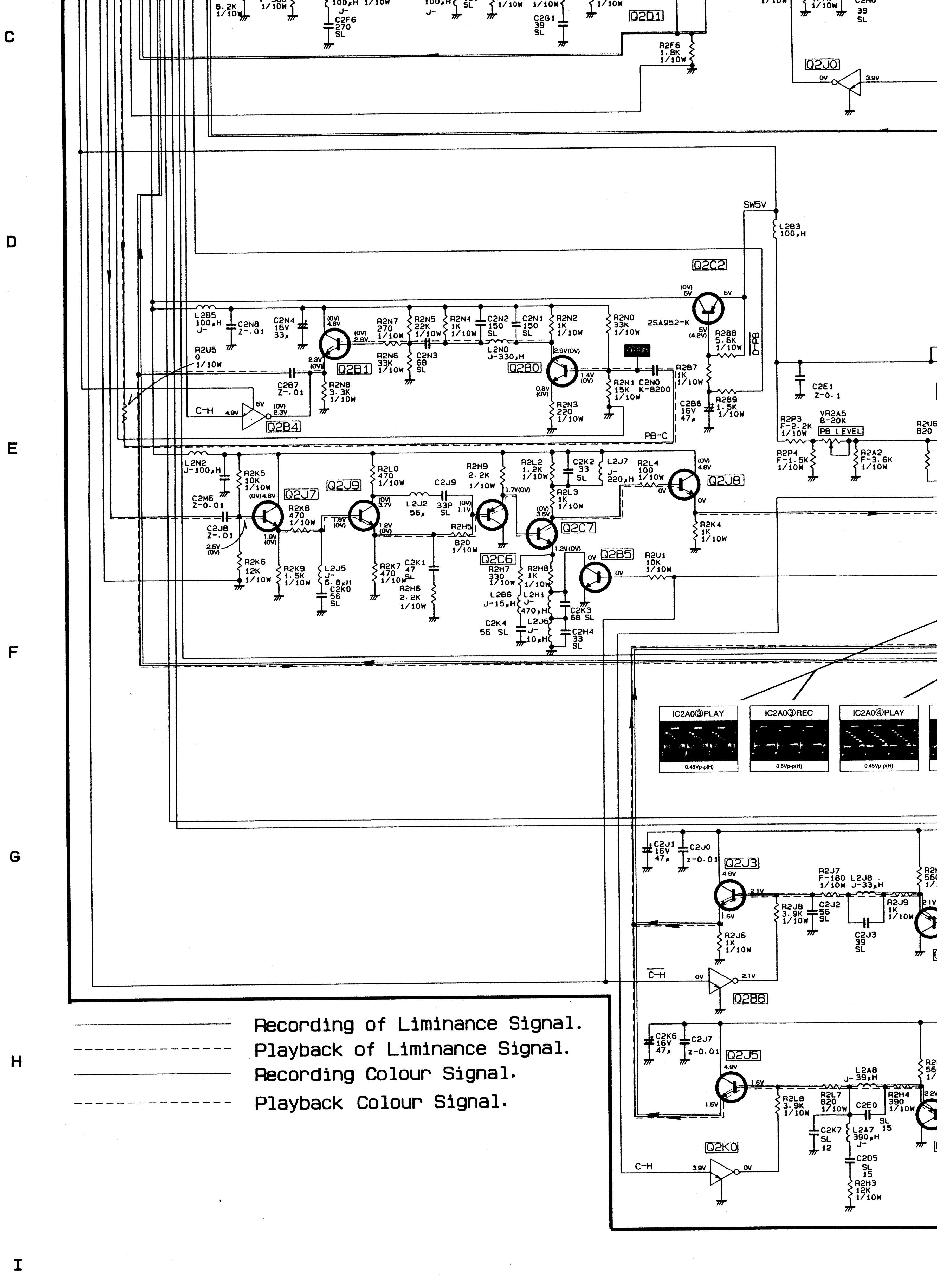
⚠ PCB-TERMINAL


1
2
3
4
5
6
7
A
B
C
D
E
F
INITIAL RESET
S2A0
REMOTE
J7A2
J2A0
VIDEO-IN (BNC)
V-IN
J2A1
VIDEO-OUT (BNC)
V-OUT
MIC IN
J3A3
J3A1
AUDIO IN (RCA pin)
J3A2
AUDIO OUT (RCA pin)
Q301
DTC124EK
/UN2212
IC300
M5201FP
J7A1
UNIT-SCREW-TERMINAL
SCREW TERMINALS (Top) (Left-BACK PANEL-Right)
DC-OUT
CALL
CLOCK
(SW)
MODE
ALM
GND
REC
RESET
SET
D7A7
D7A8
D7A9
EQA02-12A/
RD13EB1
J12
J13
TP2J
K7A0
RA5W-0H-K
D7B0
R7A5
75
BT301
US2025-HN1
R317
56
1/4W
SW12V
L7A1
L7A2
L7A3
L7A4
L7A5
L7A6
L7A7
BLM21A601S
BATT
GND(BATT)
REMO
GND(REMO)
GND(V-OUT)
V-OUT
GND(V-IN)
V-IN
SW5V
TK
MK
TO PCB-MAIN(M/C)
(MOL)
TN-RST
GND
A-OUT
GND (A-OUT)
A-IN
GND (A-IN)
SW12V
GND
GND
TJ
MJ
TO PCB-MAIN(AUDIO)
SET
RESET
REC
GND
ALM-OUT
MODE-OUT
CLOCK-OUT
CALL-OUT
TQ
MQ
TO PCB-MAIN(M/C)

NOTE

Unless otherwise specified resistors are 1/4W or 1/6W
ALL DIODES ARE 1SS252/1SS131 UNLESS OTHERWISE SPECIFIED


CONNECTOR SR ⑦ PLAY
0.26Vp-p(H)
CONNECTOR SR ⑨ PLAY
0.28Vp-p(H)
CONNECTOR SR ⑪ REC
0.27Vp-p(H)
CONNECTOR SR ⑬ REC
0.35Vp-p(H)
1
2
3
4
5
A
B
C
D
E
F
G
PCB-MAIN(HEAD-AMP) MR
SR
GND
SW5V
SW12V
C-H
PIX
GND(PB-FM)
PB-FM
GND(PB-C)
PB-C
GND(REC-FM)
REC-FM
GND
REC-C
PB5V
SP
EE
L18H
TP2B
L2H0 100μH
L2K1 100μH J-
C2F5 16V 47μ
C2F4 Z-.01
Q2C3
C2F7 22 SL
R2C0 470 1/10W
R2U0 8.2K 1/10W
R2C6 F-560 1/10W
R2D1 F-330 1/10W
L2J1 27μH J-
L2J0 100μH J-
C2F6 270 SL
R2D3 F-100 1/10W
R2E2 F-680 1/10W
C2F8 270 SL
L2J3 100μH J-
L2J4 270μH J-
C2F9 180 SL
C2G0 Z-.01
R2E3 F-1.2K 1/10W
R2E4 F-1.1K 1/10W
R2E5 F-470 1/10W
C2G1 39 SL
R2F5 100 1/10W
R2E6 15K 1/10W
R2E7 18K 1/10W
Q2D1
Q2D2
R2F6 1.8K 1/10W
R2F7 100 1/10W
R2F8 2.2K 1/10W
R2F9 4.7K 1/10W
C2G2 Z-0.01
C2G3 Z-.01
C2G4 16V 47μ
C2H0 39 SL
Q2J0
SW5V
L2B3 100μH
Q2C2
2SA952-K
R2B8 5.6K 1/10W
R2B9 1.5K 1/10W
R2B7 1K 1/10W
C2B6 16V 47μ
O-PB
L2B5 100μH J-
C2N8 Z-.01
C2N4 16V 33μ
R2U5 0 1/10W
Q2B1
R2N7 270 1/10W
R2N6 33K 1/10W
R2N5 22K 1/10W
C2N3 68 SL
R2N4 1K 1/10W
C2N2 150 SL
C2N1 150 SL
L2N0 J-330μH
R2N2 1K 1/10W
Q2B0
R2N0 33K 1/10W
R2N1 15K 1/10W
C2N0 K-8200
R2N3 220 1/10W
C2B7 Z-.01
R2N8 3.3K 1/10W
C-H
Q2B4
PB-C
C2E1 Z-0.1
R2P3 F-2.2K 1/10W
VR2A5 B-20K
PB LEVEL
R2P4 F-1.5K 1/10W
R2A2 F-3.6K 1/10W
R2U6 820
L2N2 J-100μH
C2M6 Z-0.01
R2K5 10K 1/10W
Q2J7
C2J8 Z-.01
R2K8 470 1/10W
R2K6 12K 1/10W
R2K9 1.5K 1/10W
Q2J9
R2L0 470 1/10W
L2J2 56μ
C2J9 33P SL
L2J5 J-6.8μH
C2K0 56 SL
R2K7 470 1/10W
C2K1 47 SL
R2H6 2.2K 1/10W
R2H9 2.2K 1/10W
R2H5 820 1/10W
Q2C6
R2L2 1.2K 1/10W
R2L3 1K 1/10W
C2K2 33 SL
L2J7 J-220μH
R2L4 100 1/10W
Q2J8
Q2C7
R2K4 1K 1/10W
R2H7 330 1/10W
R2H8 1K 1/10W
L2B6 J-15μH
L2H1 J-470μH
L2J6 J-10μH
C2K3 68 SL
C2H4 33 SL
C2K4 56 SL
Q2B5
R2U1 10K 1/10W
IC2A0③PLAY
0.48Vp-p(H)
IC2A0③REC
0.5Vp-p(H)
IC2A0④PLAY
0.45Vp-p(H)
C2J1 16V 47μ
C2J0 z-0.01
Q2J3
R2J7 F-180 1/10W
L2J8 J-33μH
R2J8 3.9K 1/10W
C2J2 56 SL
R2J9 1K 1/10W
C2J3 39 SL
R2J6 1K 1/10W
C-H
Q2B8

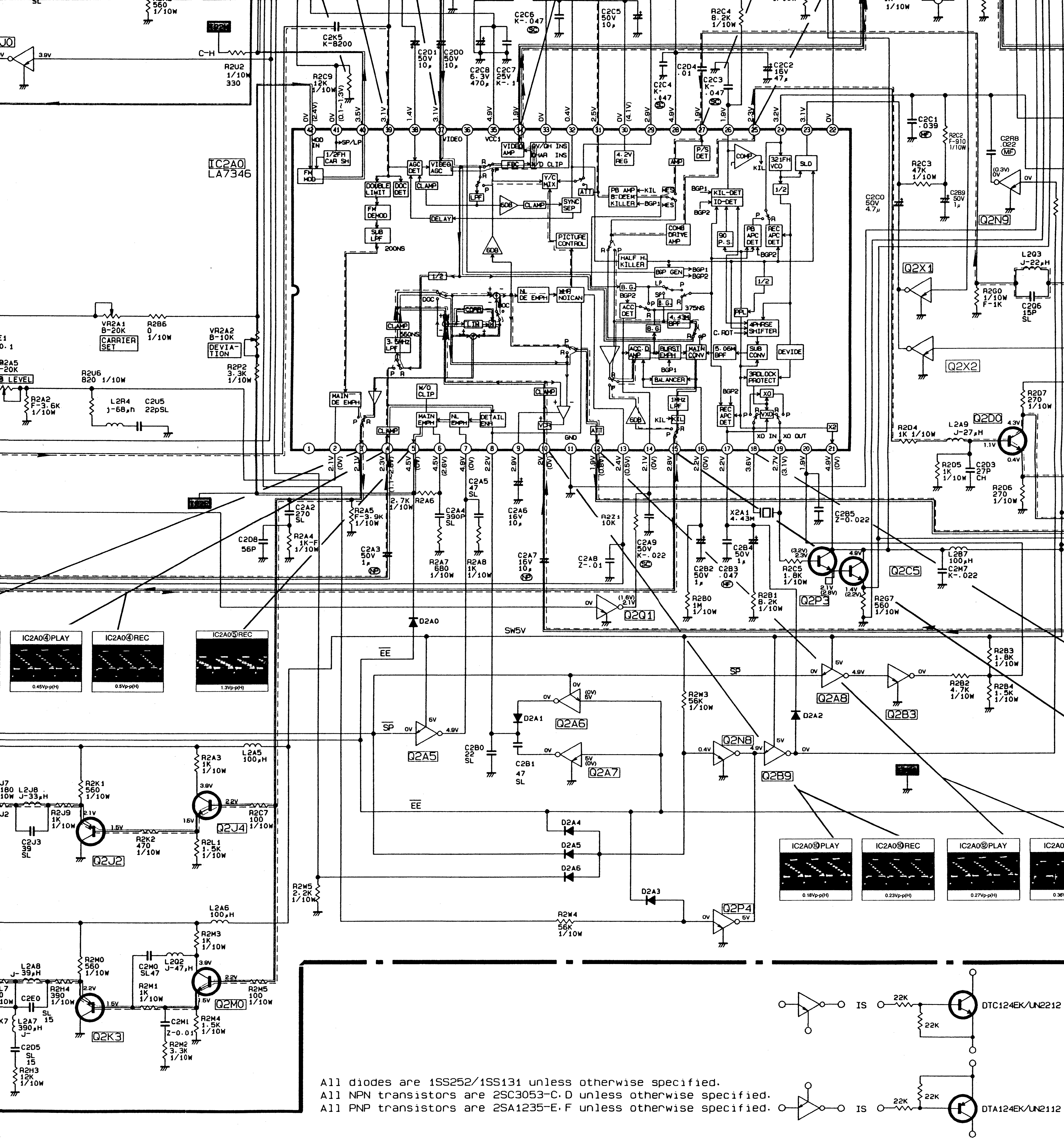

C
D
E
F
G
H
I
J
Q2D1
Q2J0
SW5V
L2B3 100μH
Q2C2
2SA952-K
Q2B1
Q2B0
Q2B4
C-H
PB-C
O-PB
R2U5 0 1/10W
L2B5 100μH J-
C2N8 Z-.01
C2N4 16V 33μ
R2N7 270 1/10W
R2N6 33K 1/10W
R2N5 22K 1/10W
C2N3 68 SL
R2N4 1K 1/10W
C2N2 150 SL
C2N1 150 SL
L2N0 J-330μH
R2N2 1K 1/10W
R2N0 33K 1/10W
R2N1 15K 1/10W
C2N0 K-8200
R2N3 220 1/10W
R2N8 3.3K 1/10W
C2B7 Z-.01
R2B7 1K 1/10W
R2B8 5.6K 1/10W
R2B9 1.5K 1/10W
C2B6 16V 47μ
C2E1 Z-0.1
R2P3 F-2.2K 1/10W
VR2A5 B-20K
PB LEVEL
R2P4 F-1.5K 1/10W
R2A2 F-3.6K 1/10W
Q2J7
Q2J9
Q2J8
Q2C6
Q2C7
Q2B5
L2N2 J-100μH
R2K5 10K 1/10W
C2M6 Z-0.01
C2J8 Z-.01
R2K6 12K 1/10W
R2K8 470 1/10W
R2K9 1.5K 1/10W
L2J5 J-6.8μH
C2K0 56 SL
R2L0 470 1/10W
L2J2 56μ
C2J9 33P SL
R2K7 470 1/10W
C2K1 47 SL
R2H6 2.2K 1/10W
R2H5 820 1/10W
R2H9 2.2K 1/10W
R2L2 1.2K 1/10W
C2K2 33 SL
L2J7 J-220μH
R2L4 100 1/10W
R2L3 1K 1/10W
R2K4 1K 1/10W
R2U1 10K 1/10W
R2H7 330 1/10W
R2H8 1K 1/10W
L2B6 J-15μH
L2H1 J-470μH
C2K3 68 SL
C2K4 56 SL
L2J6 J-10μH
C2H4 33 SL
IC2A0③PLAY
IC2A0③REC
IC2A0④PLAY
0.48Vp-p(H)
0.5Vp-p(H)
0.45Vp-p(H)
C2J1 16V 47μ
C2J0 z-0.01
Q2J3
R2J7 F-180 1/10W
L2J8 J-33μH
R2J8 3.9K 1/10W
C2J2 56 SL
R2J9 1K 1/10W
C2J3 39 SL
R2J6 1K 1/10W
C-H
Q2B8
C2K6 16V 47μ
C2J7 z-0.01
Q2J5
L2A8 J-39μH
R2L8 3.9K 1/10W
R2L7 820 1/10W
C2E0
R2H4 390 1/10W
C2K7 SL 12
L2A7 390μH J-
C2D5 SL 15
R2H3 12K 1/10W
Q2K0
C-H

Recording of Liminance Signal.

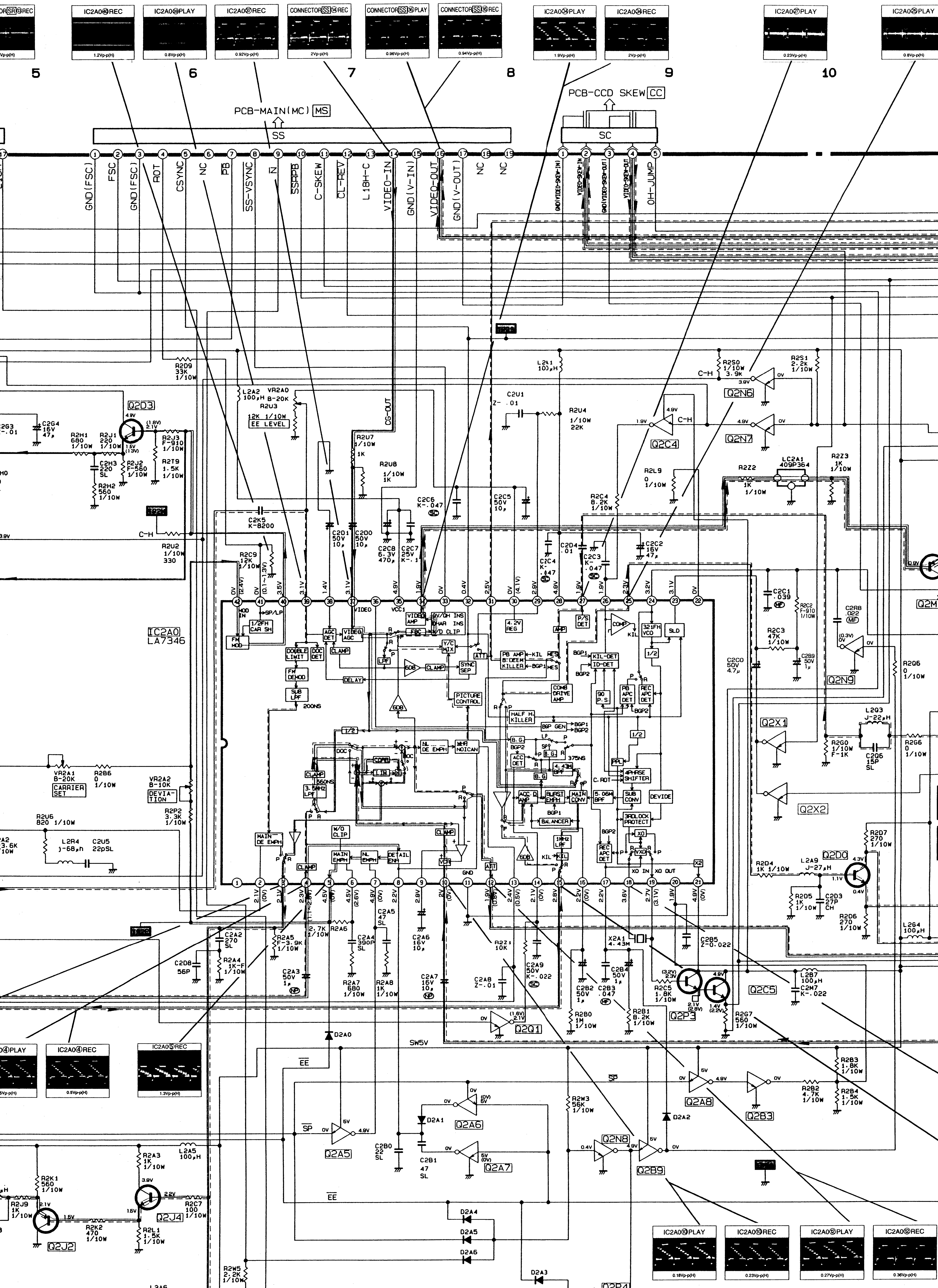
Playback of Liminance Signal.

Recording Colour Signal.

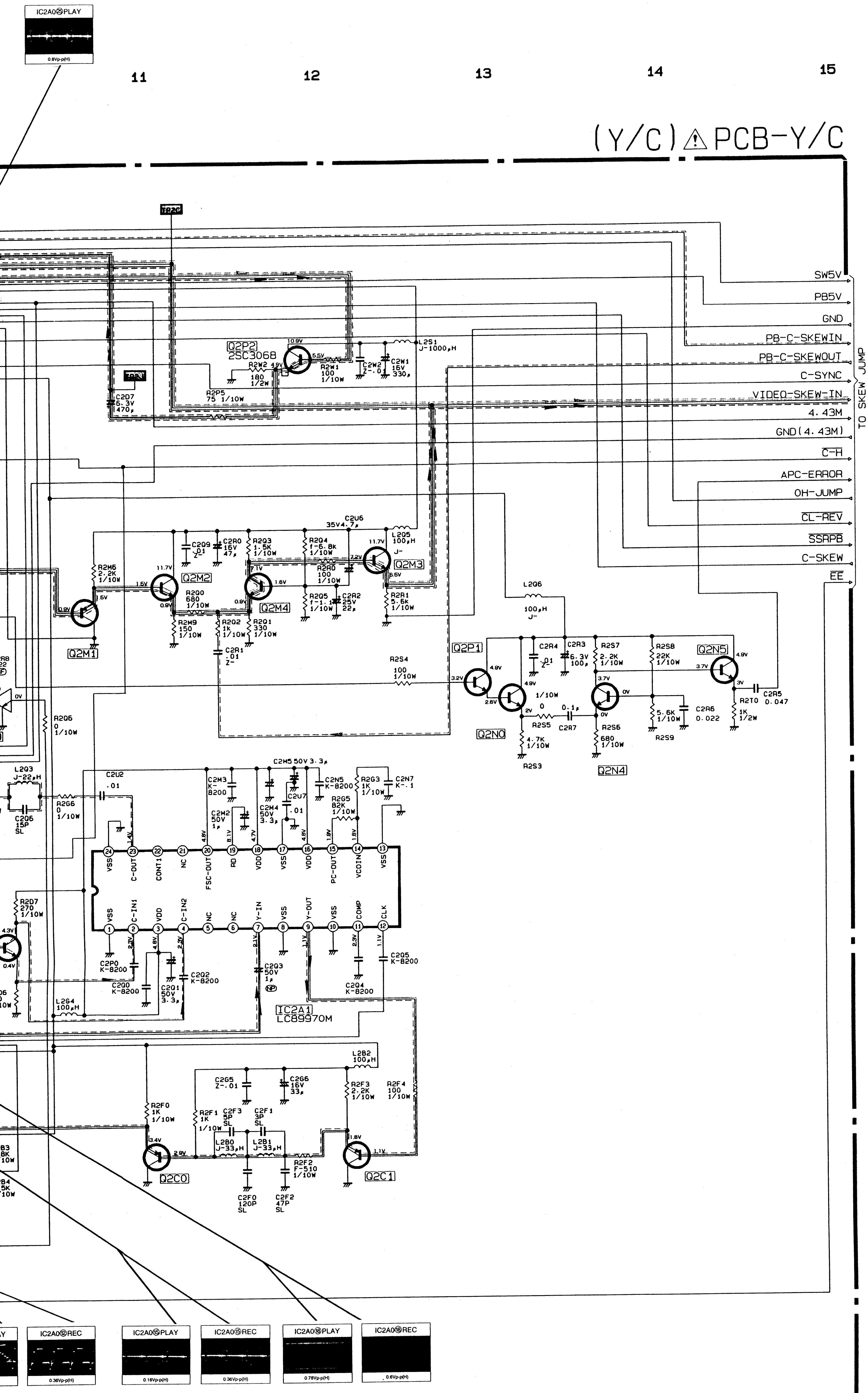
Playback Colour Signal.

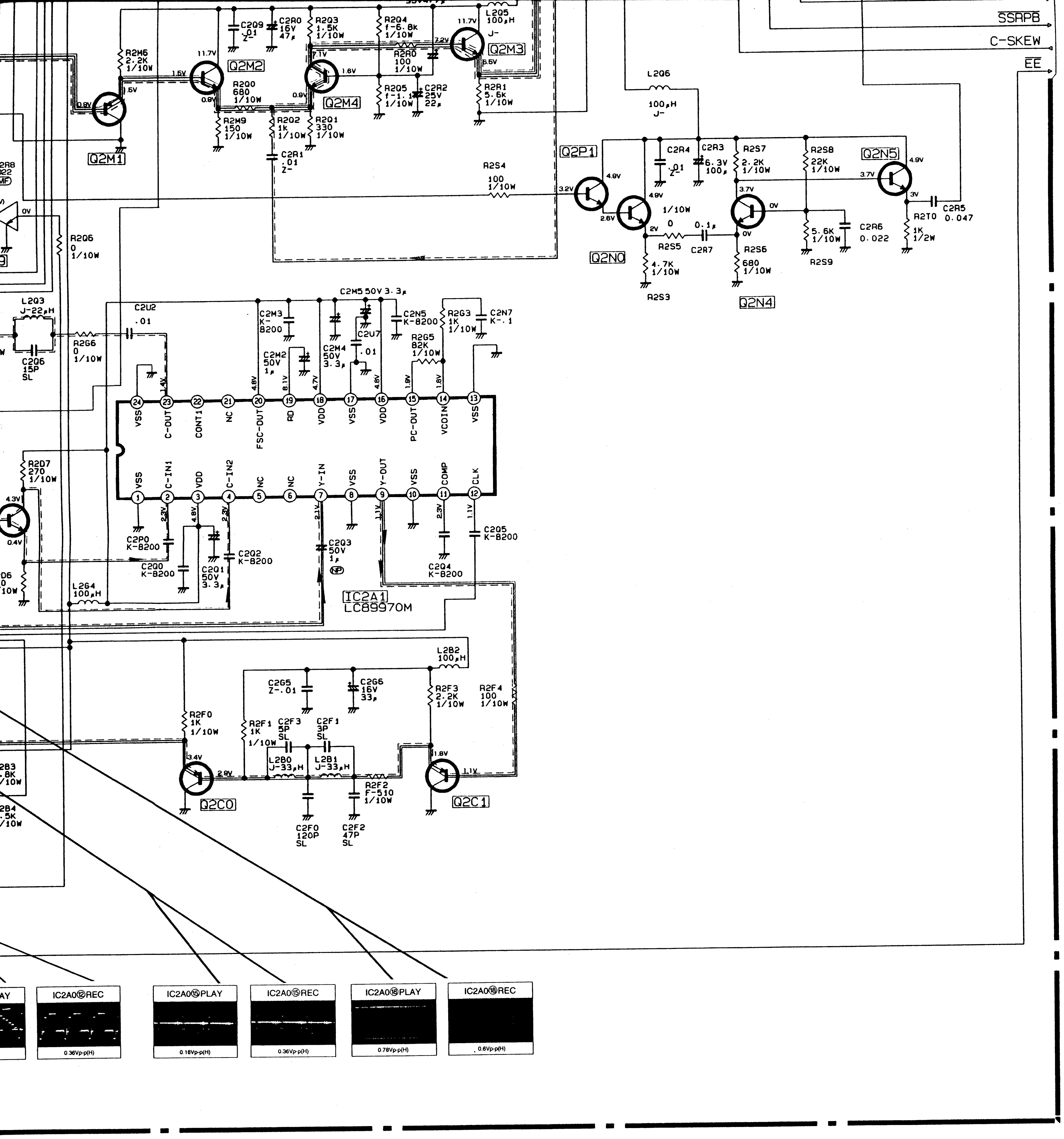

IC2A0
LA7346
IC2A0④PLAY
0.45Vp-p(H)
IC2A0④REC
0.5Vp-p(H)
IC2A0⑤REC
1.3Vp-p(H)
IC2A0⑩PLAY
0.18Vp-p(H)
IC2A0⑩REC
0.23Vp-p(H)
IC2A0⑫PLAY
0.27Vp-p(H)
Q2N9
Q2X1
Q2X2
Q2D0
Q2C5
Q2P3
Q2Q1
Q2A5
Q2A6
Q2A7
Q2A8
Q2B3
Q2N8
Q2B9
Q2P4
Q2J2
Q2J4
Q2K3
Q2M0
VR2A1 B-20K CARRIER SET
VR2A2 B-10K DEVIATION
X2A1 4.43M
SW5V
EE
SP
FM MOD
1/2FH CAR SH
AGC DET
VIDEO AGC
VIDEO AMP
DOUBLE LIMIT
DOC DET
CLAMP
FM DEMOD
SUB LPF
DELAY
LPF
6DB
Y/C MIX
SYNC SEP
PICTURE CONTROL
PB AMP B-DEEM KILLER
4.2V REG
P/S DET
COMP
321FH VCO
SLD
KIL-DET ID-DET
COMB DRIVE AMP
90 P.S.
PB APC DET
REC APC DET
HALF H KILLER
BGP GEN
B.G.
ACC DET
4.43M BPF
4PHASE SHIFTER
ACC AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
DEVIDE
3RD LOCK PROTECT
BALANCER
1MHZ LPF
KIL
REC APC DET
VXO
XO IN
XO OUT
MAIN DE EMPH
W/O CLIP
MAIN EMPH
NL EMPH
DETAIL ENH
VCR
NL DE EMPH
NHB NOICAN
3.5MHZ LPF
LIM
DOC
IS
DTC124EK/UN2212
DTA124EK/UN2112
22K

All diodes are 1SS252/1SS131 unless otherwise specified.
All NPN transistors are 2SC3053-C.D unless otherwise specified.
All PNP transistors are 2SA1235-E.F unless otherwise specified.


5
6
7
8
9
10
IC2A0㊹REC
IC2A0㊶PLAY
IC2A0㊲REC
CONNECTOR SS ⑭REC
CONNECTOR SS ⑯PLAY
CONNECTOR SS ⑯REC
IC2A0㉞PLAY
IC2A0㉞REC
IC2A0㉗PLAY
IC2A0㉕PLAY
1.2Vp-p(H)
0.8Vp-p(H)
0.92Vp-p(H)
2Vp-p(H)
0.96Vp-p(H)
0.94Vp-p(H)
1.9Vp-p(H)
2Vp-p(H)
0.23Vp-p(H)
0.8Vp-p(H)
PCB-MAIN(MC) MS
PCB-CCD SKEW CC
SS
SC
GND(FSC)
FSC
GND(FSC)
ROT
CSYNC
NC
PB
SS-VSYNC
N
SSRPB
C-SKEW
CL-REV
L18H-C
VIDEO-IN
GND(V-IN)
VIDEO-OUT
GND(V-OUT)
NC
NC
GND(VIDEO-SKEW-IN)
VIDEO-SKEW-IN
GND(VIDEO-SKEW-OUT)
VIDEO-SKEW-OUT
OH-JUMP
IC2A0
LA7346
Q2D3
Q2C4
Q2N6
Q2N7
Q2N9
Q2X1
Q2X2
Q2D0
Q2Q1
Q2P3
Q2C5
Q2A5
Q2A6
Q2A7
Q2A8
Q2B3
Q2N8
Q2B9
Q2J2
Q2J4
VR2A0 B-20K
VR2A1 B-20K CARRIER SET
VR2A2 B-10K DEVIA-TION
EE LEVEL
CG-OUT
C-H
SW5V
EE
SP
X2A1 4.43M
LC2A1 409P364
L2A2 100μH
L241 10μH
L2B7 100μH
L2B3 J-22μH
L2A9 J-27μH
L2B4 100μH
L2R4 J-68μH
L2A5 100μH
D2A0
D2A1
D2A2
D2A3
D2A4
D2A5
D2A6
FM MOD
1/2FH CAR SH
DOUBLE LIMIT
DOC DET
AGC DET
VIDEO AGC
CLAMP
FM DEMOD
SUB LPF
DELAY
200NS
VIDEO AMP
9V/OH INS CHAR INS V/D CLIP
FBC
Y/C MIX
ATT
LPF
6DB
SYNC SEP
PICTURE CONTROL
PB AMP B.DEEM KILLER
KIL
MES
BGP1
BGP2
4.2V REG
P/S DET
AMP
COMP
KIL-DET
ID-DET
321FH VCO
SLD
1/2
COMB DRIVE AMP
90 P.S.
PB APC DET
REC APC DET
HALF H. KILLER
BGP GEN
B.G.
ACC DET
4.43M BPF
375NS
ACC AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
DEVIDE
4PHASE SHIFTER
3RD LOCK PROTECT
BALANCER
1MHz LPF
REC APC DET
XO
VXO
XO IN
XO OUT
X2
C.ROT
PPL
NL DE EMPH
WHF NOICAN
COMB
LIM
DOC
560NS
3.5MHz LPF
MAIN DE EMPH
W/O CLIP
MAIN EMPH
NL EMPH
DETAIL ENH
VCA
GND
VIDEO
VCC1
MOD IN
SP/LP
R2D9 33K 1/10W
R2H1 680 1/10W
R2J1 220 1/10W
R2J3 F-910 1/10W
R2J2 F-560 1/10W
R2T9 1.5K 1/10W
C2H3 220 SL
R2H2 560 1/10W
C2G4 16V 47μ
C2K5 K-8200
R2U2 1/10W 330
R2C9 12K 1/10W
R2U3 12K 1/10W
R2U7 1/10W 1K
R2U8 1/10W 1K
C2D1 50V 10μ
C2D0 50V 10μ
C2C8 6.3V 470μ
C2C7 25V K-.1
C2C6 K-.047
C2C5 50V 10μ
C2U1 Z-.01
R2U4 1/10W 22K
C2C4 K-.047
C2D4 .01
C2C3 K-.047
C2C2 16V 47μ
R2C4 8.2K 1/10W
R2L9 0 1/10W
R2Z2 1K 1/10W
R2Z3 1K 1/10W
R2S0 1/10W 3.9K
R2S1 2.2K 1/10W
C2C1 .039
R2C2 F-910 1/10W
R2C3 47K 1/10W
C2B9 50V 1μ
C2C0 50V 4.7μ
C2B8 .022
R2G6 0 1/10W
R2G0 1/10W F-1K
C2G6 15P SL
R2S6 0 1/10W
R2D7 270 1/10W
R2D4 1K 1/10W
R2D5 1K 1/10W
C2D3 27P CH
R2D6 270 1/10W
R2B6 0 1/10W
R2U6 820 1/10W
R2P2 3.3K 1/10W
C2U5 22pSL
C2A2 270 SL
C2D8 56P
R2A4 1K-F 1/10W
R2A5 F-3.9K 1/10W
R2A6 2.7K 1/10W
C2A3 50V 1μ
C2A4 390P SL
C2A5 47 SL
R2A7 680 1/10W
R2A8 1K 1/10W
C2A6 16V 10μ
C2A7 16V 10μ
C2A8 Z-.01
R2Z1 10K
C2A9 50V K-.022
C2B2 50V 1μ
C2B3 .047
C2B4 50V 1μ
R2B0 1M 1/10W
R2B1 8.2K 1/10W
R2C5 1.8K 1/10W
C2B5 Z-.022
C2M7 K-.022
R2G7 560 1/10W
R2B3 1.8K 1/10W
R2B2 4.7K 1/10W
R2B4 1.5K 1/10W
R2W3 56K 1/10W
C2B0 22 SL
C2B1 47 SL
R2W5 2.2K 1/10W
R2A3 1K 1/10W
R2K1 560 1/10W
R2J9 1K 1/10W
R2K2 470 1/10W
R2L1 1.5K 1/10W
R2C7 100 1/10W
IC2A0④PLAY
IC2A0④REC
IC2A0⑤REC
0.5Vp-p(H)
1.3Vp-p(H)
IC2A0⑩PLAY
IC2A0⑩REC
IC2A0⑫PLAY
IC2A0⑫REC
0.18Vp-p(H)
0.23Vp-p(H)
0.27Vp-p(H)
0.38Vp-p(H)

(Y/C) ⚠ PCB-Y/C

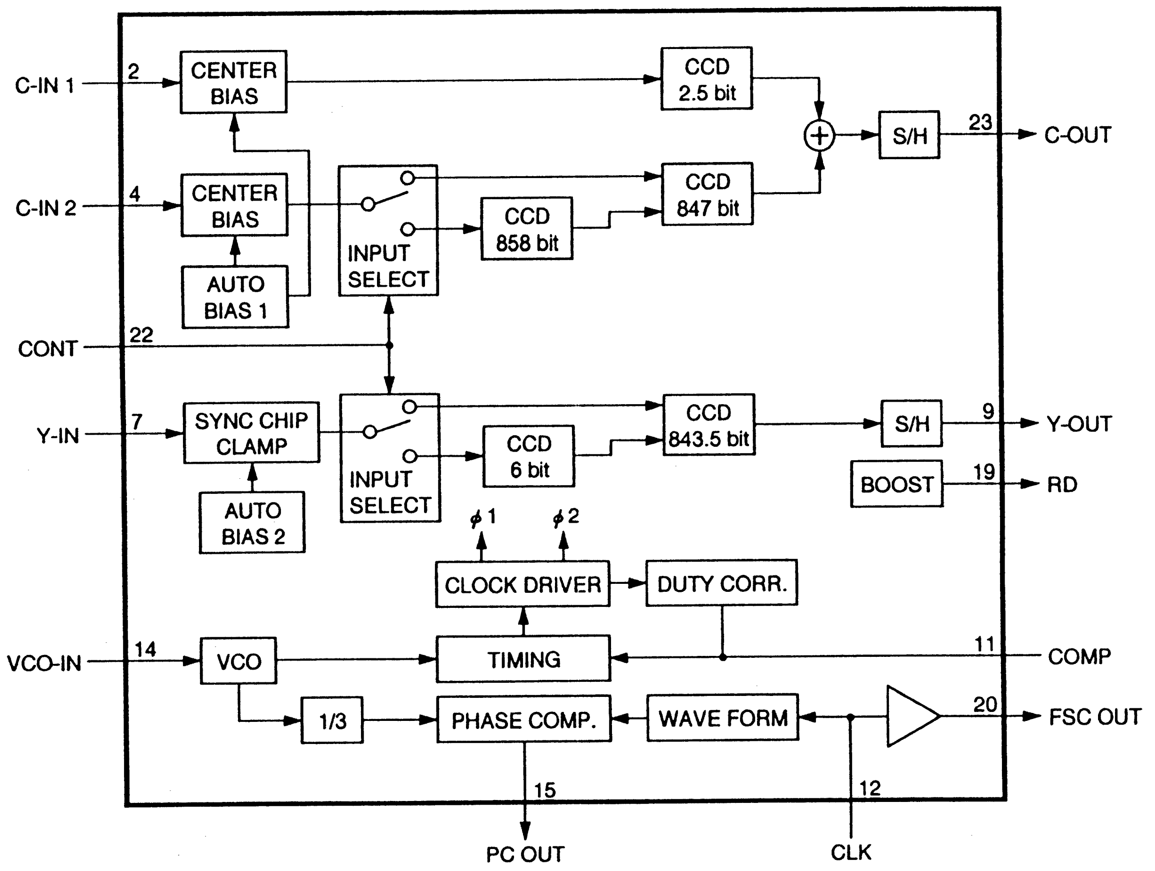

IC2A0㉓PLAY
0.8Vp-p(H)
11
12
13
14
15
SW5V
PB5V
GND
PB-C-SKEWIN
PB-C-SKEWOUT
C-SYNC
VIDEO-SKEW-IN
4.43M
GND(4.43M)
C-H
APC-ERROR
OH-JUMP
CL-REV
SSRPB
C-SKEW
EE
TO SKEW JUMP
Q2P2 2SC3068
R2W2 180 1/2W
R2W1 100 1/10W
C2W2 Z-.01
C2W1 16V 330μ
L2S1 J-1000μH
C2D7 6.3V 470μ
R2P5 75 1/10W
C2U6 35V4.7μ
L2O5 100μH J-
C2O9 .01 Z-
C2R0 16V 47μ
R2Q3 1.5K 1/10W
R2Q4 f-6.8K 1/10W
R2R0 100 1/10W
R2M6 2.2K 1/10W
Q2M1
Q2M2
Q2M3
Q2M4
R2Q0 680 1/10W
R2M9 150 1/10W
R2Q2 1k 1/10W
R2Q1 330 1/10W
C2R1 .01 Z-
R2Q5 f-1.1k 1/10W
C2R2 25V 22μ
R2R1 5.6k 1/10W
L2O6 100μH J-
Q2P1
Q2N0
Q2N4
Q2N5
R2S4 100 1/10W
C2R4 .01 Z-
C2R3 6.3V 100μ
R2S7 2.2K 1/10W
R2S8 22K 1/10W
R2S5 0 1/10W
C2R7 0.1μ
R2S3 4.7K 1/10W
R2S6 680 1/10W
R2S9 5.6K 1/10W
C2R6 0.022
C2R5 0.047
R2T0 1K 1/2W
R2O6 0 1/10W
L2O3 J-22μH
C2O6 15P SL
R2G6 0 1/10W
C2U2 .01
C2M3 K-8200
C2M5 50V 3.3μ
C2N5 K-8200
R2G3 1K 1/10W
C2N7 K-.1
C2M2 50V 1μ
C2M4 50V 3.3μ
C2U7 .01
R2G5 82K 1/10W
VSS
C-OUT
CONT1
NC
FSC-OUT
RD
VDD
PC-OUT
VCOIN
C-IN1
C-IN2
Y-IN
Y-OUT
COMP
CLK
IC2A1 LC89970M
C2P0 K-8200
C2Q0 K-8200
C2O1 50V 3.3μ
C2Q2 K-8200
C2Q3 50V 1μ
C2Q4 K-8200
C2Q5 K-8200
R2D7 270 1/10W
L2G4 100μH
L2B2 100μH
C2G5 Z-.01
C2G6 16V 33μ
R2F0 1K 1/10W
R2F1 1K 1/10W
C2F3 5P SL
C2F1 3P SL
L2B0 J-33μH
L2B1 J-33μH
R2F2 F-510 1/10W
R2F3 2.2K 1/10W
R2F4 100 1/10W
C2F0 120P SL
C2F2 47P SL
Q2C0
Q2C1
IC2A0⑫REC
0.36Vp-p(H)
IC2A0⑮PLAY
0.18Vp-p(H)
IC2A0⑮REC
0.36Vp-p(H)
IC2A0⑯PLAY
0.78Vp-p(H)
IC2A0⑯REC
0.6Vp-p(H)

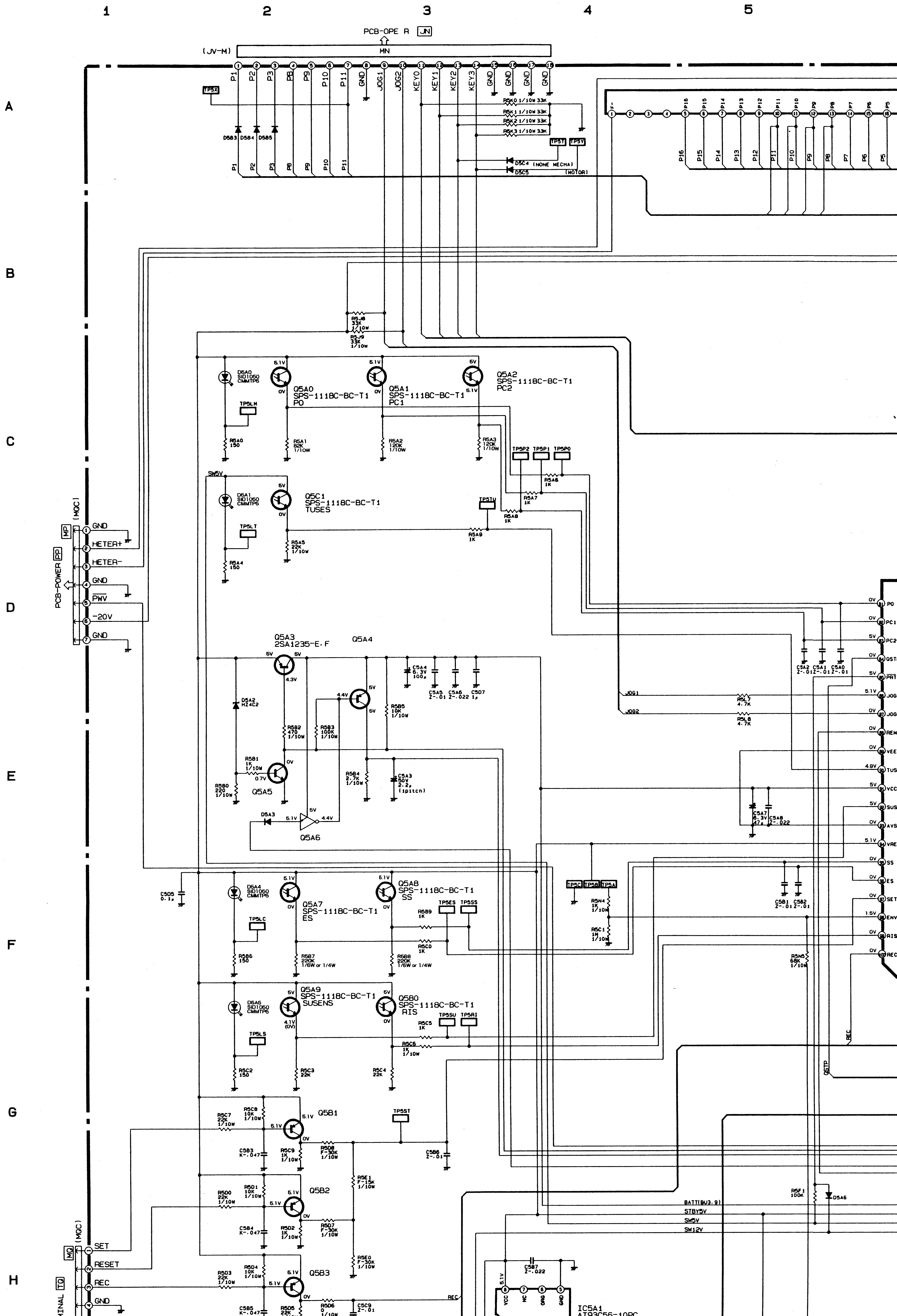

SSRPB
C-SKEW
EE
Q2M1
Q2M2
Q2M3
Q2M4
Q2P1
Q2N0
Q2N4
Q2N5
Q2C0
Q2C1
IC2A1
LC89970M
L2O5 100μH J-
L2O6 100μH J-
L2O3 J-22μH
L2B2 100μH
L2B0 J-33μH
L2B1 J-33μH
L2G4 100μH
R2M5 2.2K 1/10W
R2O0 680 1/10W
R2M9 150 1/10W
R2O2 1k 1/10W
R2O1 330 1/10W
R2O3 1.5K 1/10W
R2O4 f-6.8k 1/10W
R2A0 100 1/10W
R2O5 f-1.1k 1/10W
R2R1 5.6K 1/10W
R2S4 100 1/10W
R2S5 1/10W
R2S3 4.7K 1/10W
R2S7 2.2K 1/10W
R2S6 680 1/10W
R2S8 22K 1/10W
R2S9 5.6K 1/10W
R2T0 1K 1/2W
R2O6 0 1/10W
R2G6 0 1/10W
R2G3 1K 1/10W
R2G5 82K 1/10W
R2D7 270 1/10W
R2F0 1K 1/10W
R2F1 1K 1/10W
R2F2 F-510 1/10W
R2F3 2.2K 1/10W
R2F4 100 1/10W
C2O9 .01 Z-
C2R0 16V 47μ
C2R1 .01 Z-
C2R2 25V 22μ
C2R4 .01 Z-
C2R3 6.3V 100μ
C2R7 0.1μ
C2R6 0.022
C2R5 0.047
C2U2 .01
C2O6 15P SL
C2M3 K-8200
C2M2 50V 1μ
C2M4 50V 3.3μ
C2M5 50V 3.3μ
C2U7 .01
C2N5 K-8200
C2N7 K-.1
C2P0 K-8200
C2Q0 K-8200
C2O1 50V 3.3μ
C2Q2 K-8200
C2O3 50V 1μ
C2O4 K-8200
C2O5 K-8200
C2G5 Z-.01
C2G6 16V 33μ
C2F3 5P SL
C2F1 3P SL
C2F0 120P SL
C2F2 47P SL
VSS
C-OUT
CONT1
NC
FSC-OUT
RD
VDD
PC-OUT
VCOIN
C-IN1
C-IN2
Y-IN
Y-OUT
COMP
CLK
IC2A0⑫REC
IC2A0⑮PLAY
IC2A0⑮REC
IC2A0⑱PLAY
IC2A0⑱REC
0.36Vp-p(H)
0.18Vp-p(H)
0.36Vp-p(H)
0.78Vp-p(H)
0.6Vp-p(H)

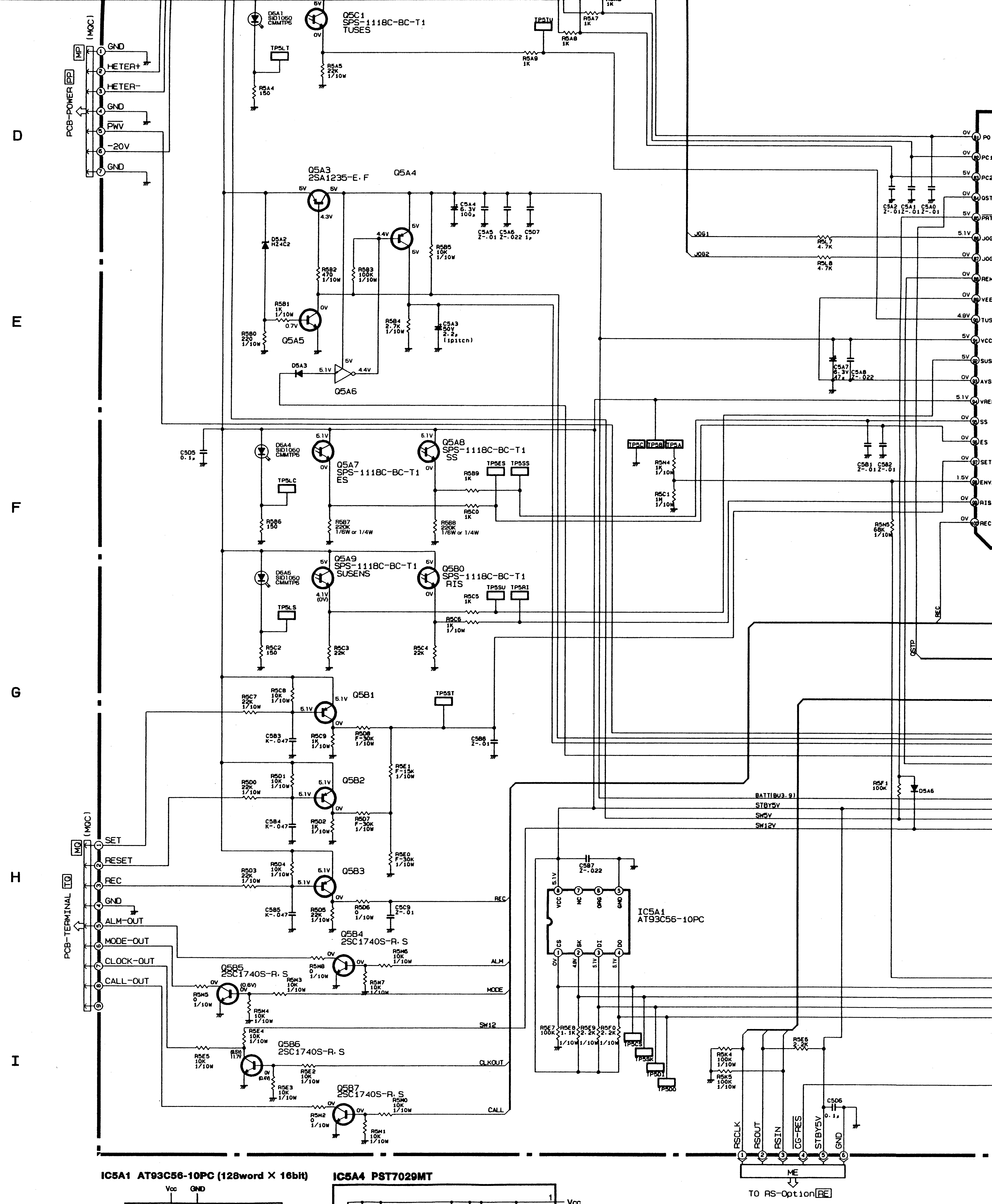
C124EK/UN2212

A124EK/UN2112

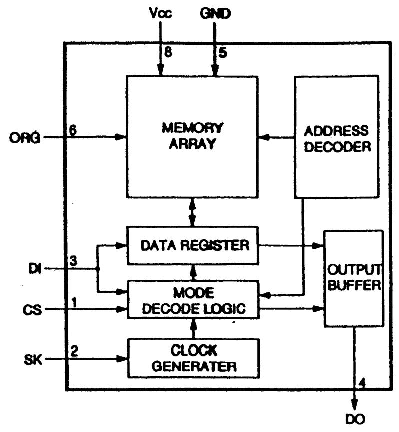
IC2A1 LC89970M


C-IN 1
2
CENTER BIAS
CCD 2.5 bit
S/H
23
C-OUT
C-IN 2
4
CENTER BIAS
INPUT SELECT
CCD 858 bit
CCD 847 bit
AUTO BIAS 1
CONT
22
Y-IN
7
SYNC CHIP CLAMP
INPUT SELECT
CCD 6 bit
CCD 843.5 bit
S/H
9
Y-OUT
BOOST
19
RD
AUTO BIAS 2
φ1
φ2
CLOCK DRIVER
DUTY CORR.
VCO-IN
14
VCO
TIMING
11
COMP
1/3
PHASE COMP.
WAVE FORM
20
FSC OUT
15
PC OUT
12
CLK

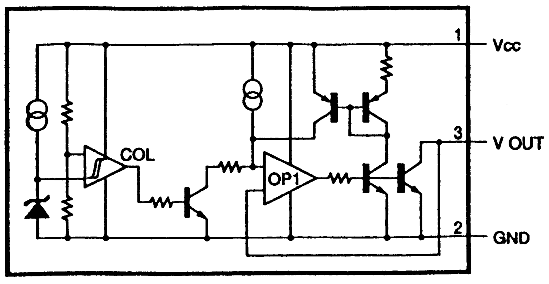

1
2
3
4
5
A
B
C
D
E
F
G
H
PCB-OPE A JN
(JV-M)
MN
P1
P2
P3
P8
P9
P10
P11
GND
JOG1
JOG2
KEY0
KEY1
KEY2
KEY3
GND
TP5X
D583 D584 D585
R5K0 1/10W 33K
R5K1 1/10W 33K
R5K2 1/10W 33K
R5K3 1/10W 33K
TP5T TP5Y
D5C4 (NONE MECHA)
D5C5 (MOTOR)
P16
P15
P14
P13
P12
P11
P10
P9
P8
P7
P6
P5
R5J8 33K 1/10W
R5J9 33K 1/10W
D5A0 SID1050 CMMTP6
Q5A0 SPS-1118C-BC-T1 PO
Q5A1 SPS-1118C-BC-T1 PC1
Q5A2 SPS-1118C-BC-T1 PC2
TP5LM
R5A0 150
R5A1 82K 1/10W
R5A2 120K 1/10W
R5A3 120K 1/10W
TP5P2 TP5P1 TP5P0
R5A6 1K
R5A7 1K
R5A8 1K
R5A9 1K
SW5V
D5A1 SID1050 CMMTP6
Q5C1 SPS-1118C-BC-T1 TUSES
TP5TU
TP5LT
R5A5 22K 1/10W
R5A4 150
PCB-POWER PP
MP
(MGC)
GND
HETER+
HETER-
GND
PWV
-20V
GND
Q5A3 2SA1235-E.F
Q5A4
D5A2 HZ4C2
C5A4 6.3V 100μ
C5A5 Z-.01
C5A6 Z-.022
C5D7 1μ
R582 470 1/10W
R583 100K 1/10W
R585 10K 1/10W
R581 1K 1/10W
R580 220 1/10W
Q5A5
R584 2.7K 1/10W
C5A3 50V 2.2μ (1pitch)
D5A3
Q5A6
C5A2 Z-.01
C5A1 Z-.01
C5A0 Z-.01
JOG1
JOG2
R5L7 4.7K
R5L8 4.7K
C5A7 6.3V 47μ
C5A8 Z-.022
PO
PC1
PC2
QSTP
PRT
JOG
JOG
REM
VEE
TUS
VCC
SUS
AVS
VRE
SS
ES
SET
ENV
RIS
REC
C505 0.1μ
D5A4 SID1050 CMMTP6
Q5A7 SPS-1118C-BC-T1 ES
Q5A8 SPS-1118C-BC-T1 SS
TP5LC
R589 1K
TP5ES TP5SS
R5C0 1K
R586 150
R587 220K 1/6W or 1/4W
R588 220K 1/6W or 1/4W
TP5C TP5B TP5A
R5N4 1K 1/10W
R5C1 1M 1/10W
C581 Z-.01
C582 Z-.01
R5N5 68K 1/10W
D6A6 SID1050 CMMTP6
Q5A9 SPS-1118C-BC-T1 SUSENS
Q5B0 SPS-1118C-BC-T1 RIS
TP5SU TP5RI
R5C5 1K
R5C6 1K 1/10W
TP5LS
R5C2 150
R5C3 22K
R5C4 22K
Q5B1
R5C7 22K 1/10W
R5C8 10K 1/10W
TP5ST
C583 K-.047
R5C9 1K 1/10W
R5D8 F-30K 1/10W
C586 Z-.01
Q5B2
R5D0 22K 1/10W
R5D1 10K 1/10W
R5E1 F-15K 1/10W
C584 K-.047
R5D2 1K 1/10W
R5D7 F-30K 1/10W
R5E0 F-30K 1/10W
BATT(BU3.9)
STBY5V
SW5V
SW12V
R5F1 100K
D5A6
MQ
TQ
SET
RESET
REC
GND
Q5B3
R503 22K 1/10W
R5D4 10K 1/10W
C585 K-.047
R505 22K
R5D6 0 1/10W
C5C9 Z-.01
C587 Z-.022
VCC
NC
ORG
GND
IC5A1 AT93C56-10PC


D
E
F
G
H
I
PCB-POWER PP
MP (MQC)
GND
HETER+
HETER-
GND
PWV
-20V
GND
D5A1 SID1060 CMMTP6
Q5C1 SPS-1118C-BC-T1 TUSES
TP5LT
R5A5 22K 1/10W
R5A4 150
TP5TU
R5A7 1K
R5A8 1K
R5A9 1K
Q5A3 2SA1235-E.F
Q5A4
D5A2 HZ4C2
R582 470 1/10W
R583 100K 1/10W
R585 10K 1/10W
C5A4 6.3V 100μ
C5A5 Z-.01
C5A6 Z-.022
C5D7 1μ
R581 1K 1/10W
R580 220 1/10W
Q5A5
R584 2.7K 1/10W
C5A3 50V 2.2μ (1pitch)
D5A3
Q5A6
JOG1
JOG2
R5L7 4.7K
R5L8 4.7K
C5A2 Z-.01
C5A1 Z-.01
C5A0 Z-.01
C5A7 6.3V 47μ
C5A8 Z-.022
C505 0.1μ
D5A4 SID1060 CMMTP6
Q5A7 SPS-1118C-BC-T1 ES
Q5A8 SPS-1118C-BC-T1 SS
TP5ES
TP5SS
TP5LC
R589 1K
R5C0 1K
R586 150
R587 220K 1/6W or 1/4W
R588 220K 1/6W or 1/4W
TP5C
TP5B
TP5A
R5N4 1K 1/10W
R5C1 1M 1/10W
C581 Z-.01
C582 Z-.01
R5N5 68K 1/10W
D5A6 SID1060 CMMTP6
Q5A9 SPS-1118C-BC-T1 SUSENS
Q5B0 SPS-1118C-BC-T1 RIS
TP5SU
TP5RI
TP5LS
R5C5 1K
R5C6 1K 1/10W
R5C2 150
R5C3 22K
R5C4 22K
REC
QSTP
P0
PC1
PC2
QST
PRT
JOG
JOG
REM
VEE
TUS
VCC
SUS
AVS
VREF
SS
ES
SET
ENVA
RIS
REC
R5C7 22K 1/10W
R5C8 10K 1/10W
Q5B1
TP5ST
C583 K-.047
R5C9 1K 1/10W
R508 F-30K 1/10W
C586 Z-.01
R5E1 F-15K 1/10W
R500 22K 1/10W
R501 10K 1/10W
Q5B2
C584 K-.047
R502 1K 1/10W
R507 F-30K 1/10W
R5E0 F-30K 1/10W
R5F1 100K
D5A6
BATT(BU3.9)
STBY5V
SW5V
SW12V
PCB-TERMINAL TQ
MQ (MQC)
SET
RESET
REC
GND
ALM-OUT
MODE-OUT
CLOCK-OUT
CALL-OUT
R503 22K 1/10W
R504 10K 1/10W
Q5B3
C585 K-.047
R505 22K 1/10W
R506 0 1/10W
C5C9 Z-.01
C587 Z-.022
IC5A1 AT93C56-10PC
VCC NC ORG GND
CS SK DI DO
Q5B4 2SC1740S-R.S
R5M8 0 1/10W
R5M6 10K 1/10W
R5M7 10K 1/10W
ALM
Q5B5 2SC1740S-R.S
R5N5 0 1/10W
R5M3 10K 1/10W
R5M4 10K 1/10W
MODE
SW12
R5E7 100K
R5E8 1.1K
R5E9 2.2K
R5F0 2.2K
TP5CS
TP5SK
TP5DI
TP5DO
R5E4 10K 1/10W
Q5B6 2SC1740S-R.S
R5E5 10K 1/10W
R5E2 10K 1/10W
R5E3 10K 1/10W
CLKOUT
R5E6 2.2K
R5K4 100K 1/10W
R5K5 100K 1/10W
C506 0.1μ
Q5B7 2SC1740S-R.S
R5M2 0 1/10W
R5M0 10K 1/10W
R5M1 10K 1/10W
CALL
RSCLK
RSOUT
RSIN
CG-RES
STBY5V
GND
ME
TO RS-Option RE

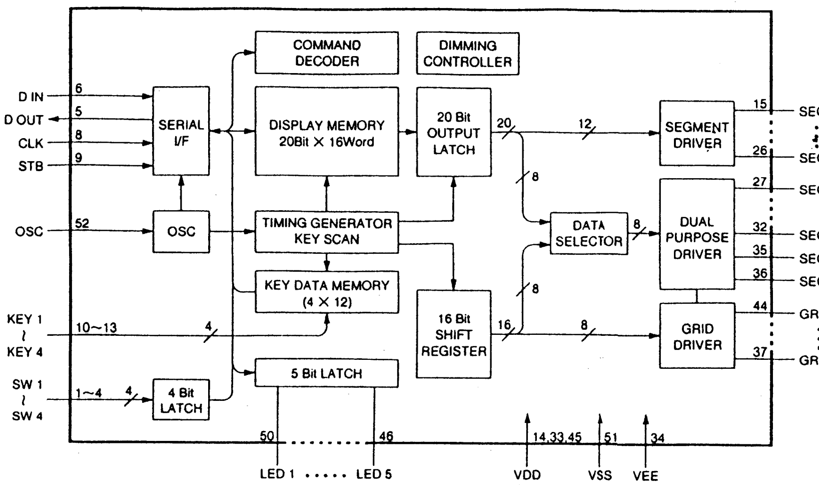
IC5A1 AT93C56-10PC (128word × 16bit)

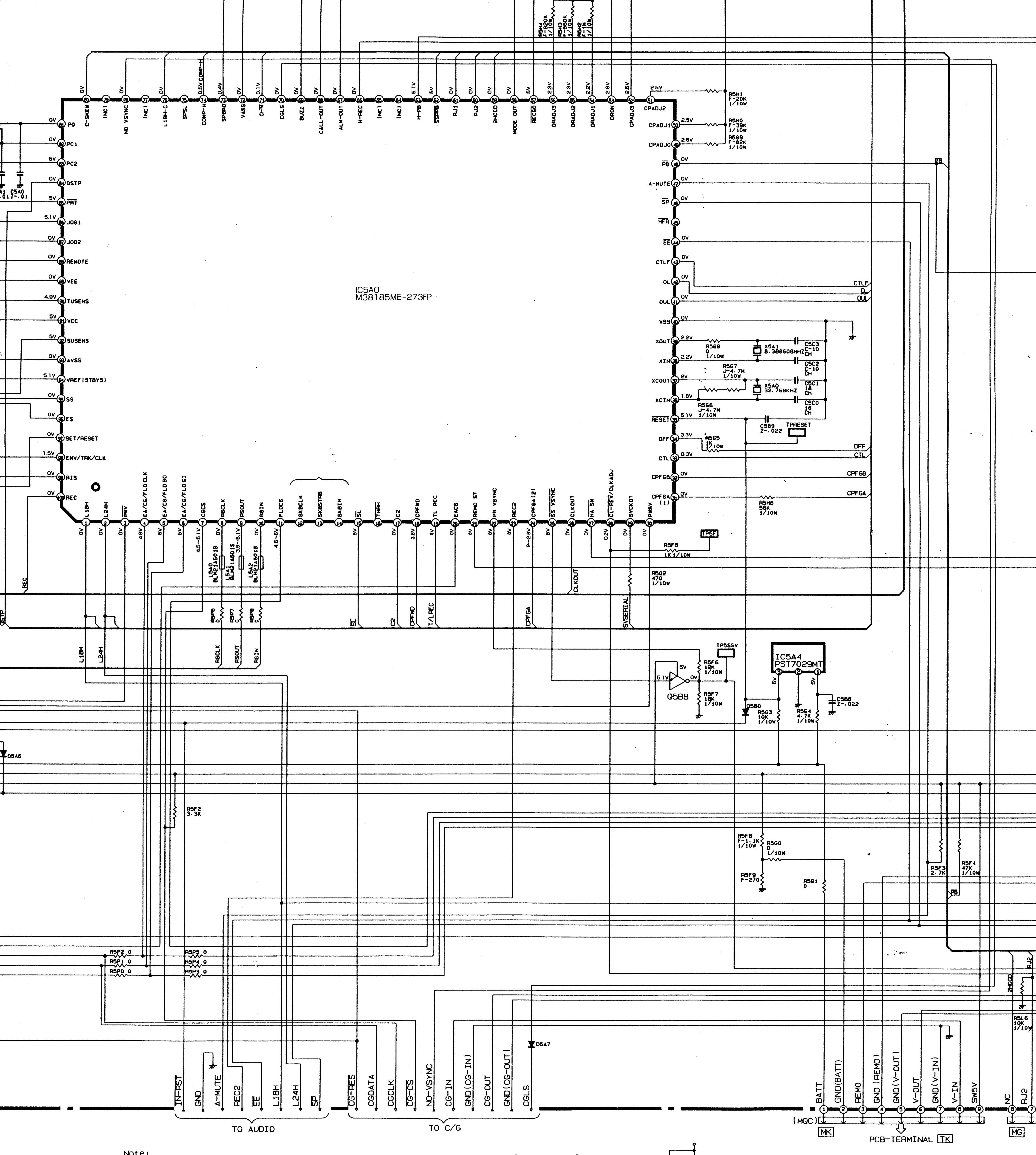

Vcc
GND
8
5
ORG
6
MEMORY ARRAY
ADDRESS DECODER
DATA REGISTER
DI
3
CS
1
MODE DECODE LOGIC
OUTPUT BUFFER
SK
2
CLOCK GENERATER
4
DO

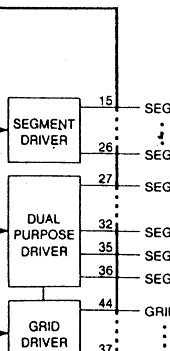
IC5A4 PST7029MT


1
Vcc
COL
OP1
3
V OUT
2
GND

IC501 µPD16311GC-AB6

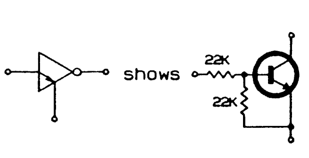

D IN
D OUT
CLK
STB
6
5
8
9
SERIAL I/F
COMMAND DECODER
DIMMING CONTROLLER
DISPLAY MEMORY 20Bit × 16Word
20 Bit OUTPUT LATCH
20
12
SEGMENT DRIVER
OSC
52
OSC
TIMING GENERATOR KEY SCAN
8
DATA SELECTOR
8
DUAL PURPOSE DRIVER
KEY DATA MEMORY (4 × 12)
KEY 1 ~ KEY 4
10~13
4
16 Bit SHIFT REGISTER
16
8
GRID DRIVER
SW 1 ~ SW 4
1~4
4
4 Bit LATCH
5 Bit LATCH
50
46
LED 1 ..... LED 5
14,33,45
51
34
VDD (+5V)
VSS (0V)
VEE (-30V)
15
26
27
32
35
36
44
37


IC5A0
M38185ME-273FP
IC5A4
PST7029MT
Q5B8
X5A1
8.388608MHZ
X5A0
32.768KHZ
TPRESET
TP5F
TP555V
D5A6
D5A7
D580
PO
PC1
PC2
QSTP
PRT
JOG1
JOG2
REMOTE
VEE
TUSENS
VCC
SUSENS
AVSS
VREF(STBY5)
SS
ES
SET/RESET
ENV/TRK/CLK
RIS
REC
CPADJ2
CPADJ1
CPADJ0
PB
A-MUTE
SP
HFR
EE
CTLF
OL
OUL
VSS
XOUT
XIN
XCOUT
XCIN
RESET
DFF
CTL
CPFGB
CPFGA
IN-RST
GND
A-MUTE
REC2
EE
L18H
L24H
SP
TO AUDIO
CG-RES
CGDATA
CGCLK
CG-CS
NO-VSYNC
CG-IN
GND(CG-IN)
CG-OUT
GND(CG-OUT)
CGLS
TO C/G
BATT
GND(BATT)
REMO
GND(REMO)
GND(V-OUT)
V-OUT
GND(V-IN)
V-IN
SW5V
NC
RJ2
(MQC)
MK
PCB-TERMINAL
TK
MG

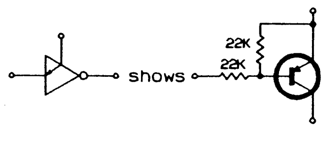

SEGMENT DRIVER
DUAL PURPOSE DRIVER
GRID DRIVER
15
26
27
32
35
36
44
37
SEG1
SEG12
SEG13/GRID16
SEG18/GRID11
SEG19/GRID10
SEG20/GRID9
GRID1
GRID8
34

Note:

Unless otherwise specified
PNP transistors are 2SA1037K-R·S/2SB709AI-R·S
NPN transistors are 2SC2412K-R·S/2SD601AI-R·S
All diodes are 1SS252/1SS131
PNP digital transistors are DTA124EK/UN2112
NPN digital transistors are DTC124EK/UN2212


shows
22K
22K

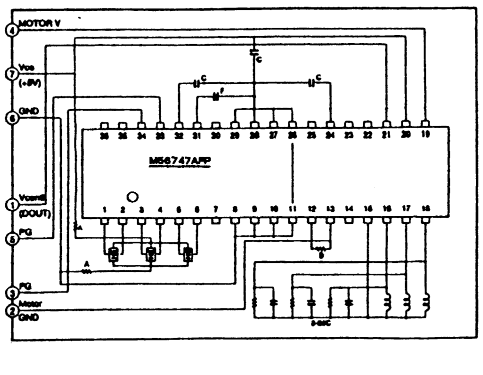
DTC124EK/UN2212


shows
22K
22K

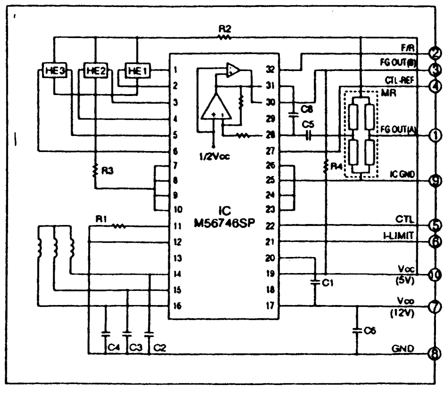
DTA124EK/UN2112

[IC-BLOCK DIAGRAMS (SERVO)(C/G)]

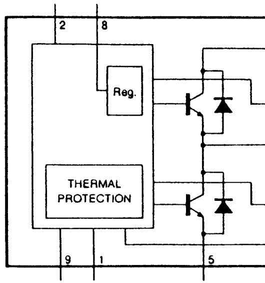
DRUM MOTOR


MOTOR V
Vcc
(+9V)
GND
Vcontrol
(DOUT)
PG
FG
Motor
GND
M56747APP

CAPSTAN MOTOR


HE3
HE2
HE1
R2
R3
R1
IC
M56746SP
1/2Vcc
C8
C5
R4
C1
C4
C3
C2
C6
F/R
FG OUT(B)
CTL REF
MR
FG OUT(A)
IC GND
CTL
I-LIMIT
Vcc
(5V)
Vcc
(12V)
GND

IC4A2 TA7291S

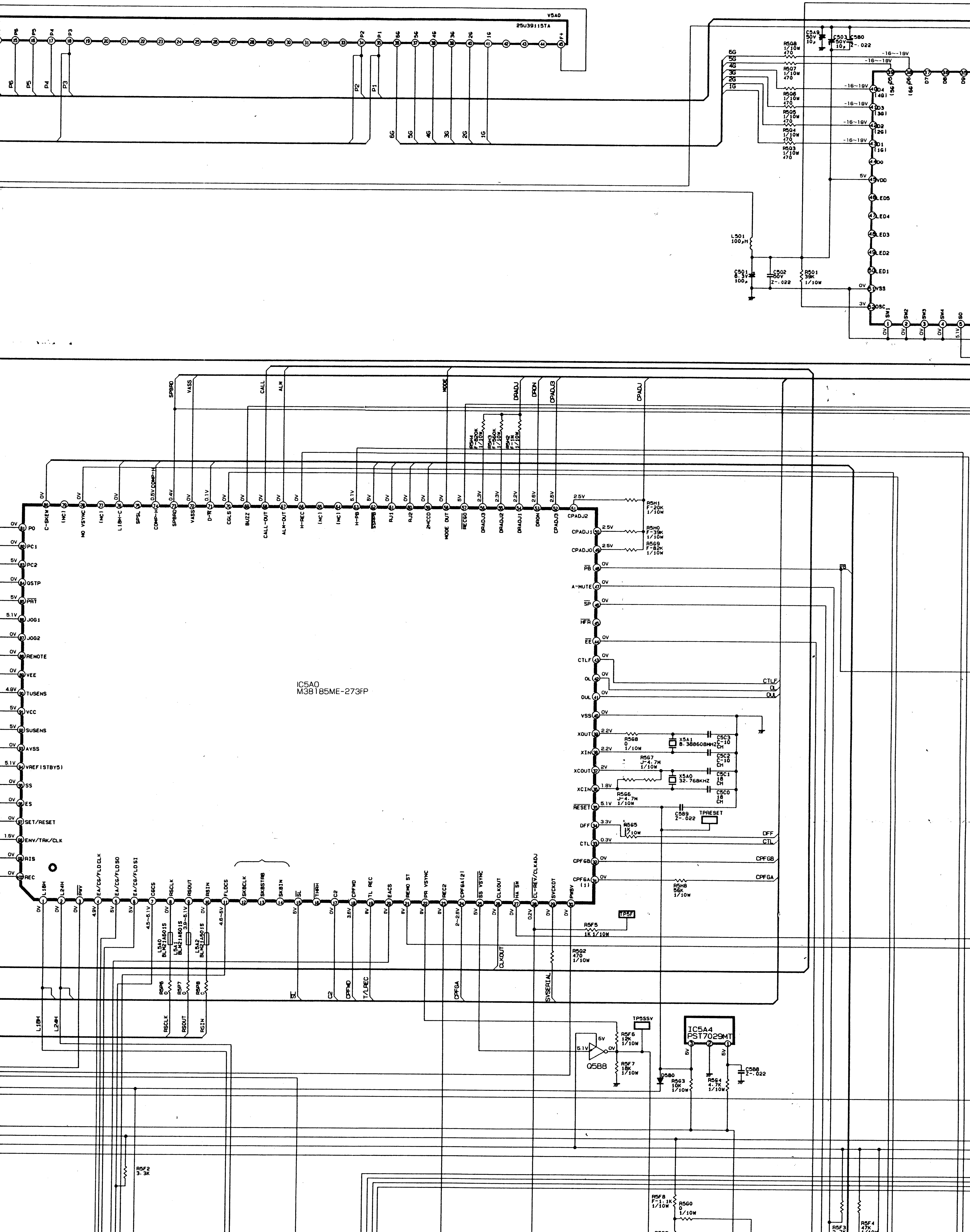

Vcc
VREF
2
8
Reg.
THERMAL PROTECTION
9
1
5
IN1
IN2
GND

INPUT		OUTPUT		MO
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	ST
1	0	H	L	CW/
0	1	L	H	CCV
1	1	L	L	BR

∞ : High impedance.
Note : Input signal activate at "H".

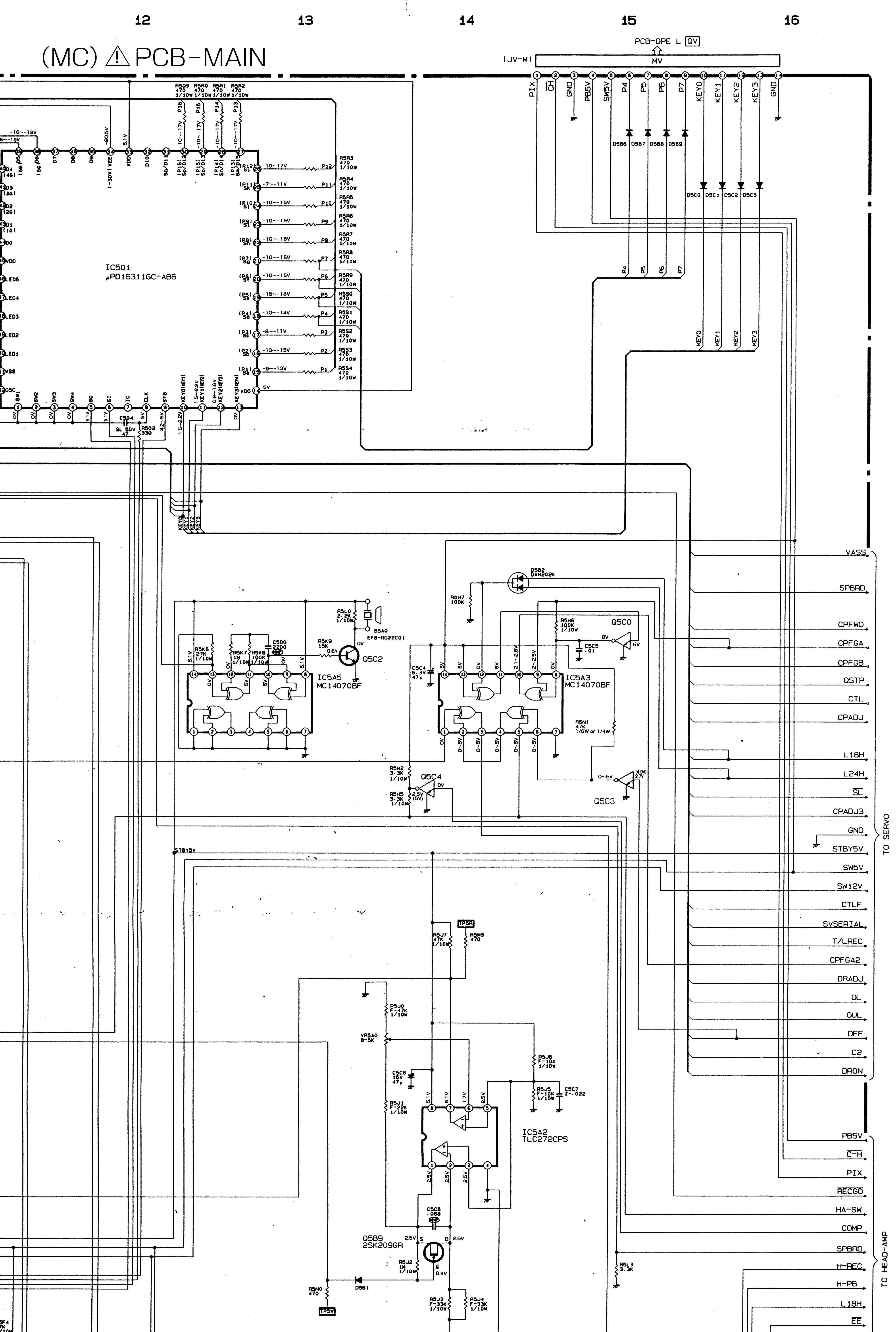
6 7 8 9 10 11

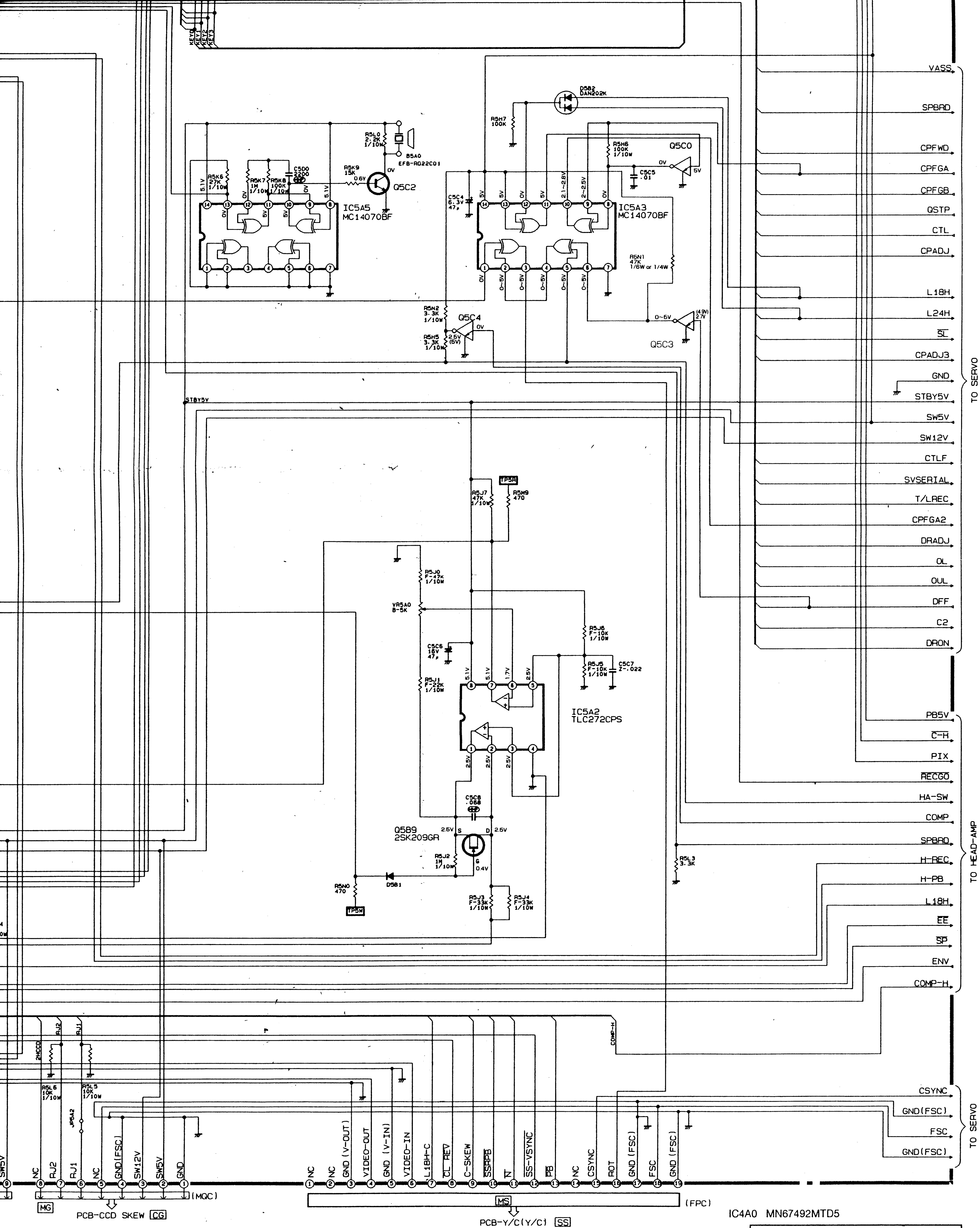
(MC)



V5A0
25U39115TA
P6
P5
P4
P3
P2
P1
6G
5G
4G
3G
2G
1G
F+
C5A9 50V 10μ
C503 50V 10μ
C580 Z-.022
R508 1/10W 470
R507 1/10W 470
R506 1/10W 470
R505 1/10W 470
R504 1/10W 470
R503 1/10W 470
-16~-19V
D4 (4G)
D3 (3G)
D2 (2G)
D1 (1G)
D0
VDD
LED5
LED4
LED3
LED2
LED1
VSS
OSC
SW1
SW2
SW3
SW4
L501 100μH
C501 6.3V 100μ
C502 50V Z-.022
R501 39K 1/10W
SPBRD
VASS
CALL
ALM
MODE
DRADJ
DRON
CPADJ3
CPADJ
R5H4 F-180K 1/10W
R5H3 F-560K 1/10W
R5H2 F-1M 1/10W
C-SKEW
NO VSYNC
L18H-C
SPSL
COMP-H
D-R
CGLS
BUZZ
CALL-OUT
ALM-OUT
H-REC
H-PB
SSPB
RJ1
RJ2
2HCCD
MODE OUT
REC60
DRADJ3
DRADJ2
DRADJ1
DRON
CPADJ2
CPADJ1
CPADJ0
R5H1 F-20K 1/10W
R5H0 F-39K 1/10W
R569 F-82K 1/10W
PB
A-MUTE
SP
HFR
EE
CTLF
OL
OUL
VSS
XOUT
XIN
XCOUT
XCIN
RESET
DFF
CTL
CPFGB
CPFGA (1)
R568 0 1/10W
X5A1 8.388608MHZ
C5C3 C-10 CH
C5C2 C-10 CH
R567 J-4.7M 1/10W
X5A0 32.768KHZ
C5C1 18 CH
C5C0 18 CH
R566 J-4.7M 1/10W
C589 Z-.022
TPRESET
R565 1K 1/10W
R5H8 56K 1/10W
IC5A0
M38185ME-273FP
P0
PC1
PC2
QSTP
PRT
JOG1
JOG2
REMOTE
VEE
TUSENS
VCC
SUSENS
AVSS
VREF(STBY5)
SS
ES
SET/RESET
ENV/TRK/CLK
RIS
REC
L18H
L24H
PWV
EA/CS/FLDCLK
EA/CS/FLDSO
EA/CS/FLDSI
C6CS
RSCLK
RSOUT
RSIN
FLDCS
SKBCLK
SKBSTRB
SKBIN
SL
THBH
C2
CPFWD
TL REC
EACS
REMO ST
PR VSYNC
REC2
CPFGA(2)
SS VSYNC
CLKOUT
HA SW
CL-REV/CLKADJ
SVCKOT
PWSV
L5A0 BLM21A601S
L5A1 BLM21A601S
L5A2 BLM21A601S
R5F5 1K 1/10W
TP5F
R5G2 470 1/10W
R5P6 0
R5P7 0
R5P8 0
RSCLK
RSOUT
RSIN
CLKOUT
SVSERIAL
T/LREC
CPFGA
TP5SSV
R5F6 12K 1/10W
R5F7 18K 1/10W
Q5B8
IC5A4
PST7029MT
D5B0
R563 10K 1/10W
R564 4.7K 1/10W
C588 Z-.022
R5F2 3.3K
R5F8 F-1.1K 1/10W
R5G0 0 1/10W
R5F3
R5F4 47K

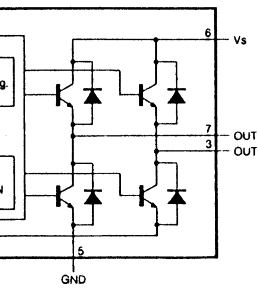
(MC) ⚠ PCB-MAIN


12
13
14
15
16
PCB-OPE L QV
(JV-M)
MV
PIX
CH
GND
PB5V
SW5V
P4
P5
P6
P7
KEY0
KEY1
KEY2
KEY3
GND
D586 D587 D588 D589
D5C0 D5C1 D5C2 D5C3
R509 470 1/10W
R5R0 470 1/10W
R5R1 470 1/10W
R5R2 470 1/10W
IC501
μPD16311GC-AB6
R5R3 470 1/10W
R5R4 470 1/10W
R5R5 470 1/10W
R5R6 470 1/10W
R5R7 470 1/10W
R5R8 470 1/10W
R5R9 470 1/10W
R5S0 470 1/10W
R5S1 470 1/10W
R5S2 470 1/10W
R5S3 470 1/10W
R5S4 470 1/10W
VEE
VDD
VSS
OSC
LED5
LED4
LED3
LED2
LED1
SW1
SW2
SW3
SW4
SO
SI
IC
CLK
STB
C5O4 SL 50V 47
R502 330
D5B2 DAN202K
R5H7 100K
R5L0 2.2K 1/10W
B5A0 EFB-RD22C01
R5K9 15K
Q5C2
R5K6 27K 1/10W
R5K7 1M 1/10W
R5K8 100K 1/10W
C5D0 2200
IC5A5
MC14070BF
C5C4 6.3V 47μ
R5H6 100K 1/10W
Q5C0
C5C5 .01
IC5A3
MC14070BF
R5N1 47K 1/6W or 1/4W
R5N2 3.3K 1/10W
Q5C4
R5H5 3.3K 1/10W
Q5C3
STBY5V
TP5R
R5J7 47K 1/10W
R5H9 470
R5J0 F-47K 1/10W
VR5A0 B-5K
C5C6 16V 47μ
R5J6 F-10K 1/10W
R5J5 F-10K 1/10W
C5C7 Z-.022
R5J1 F-22K 1/10W
IC5A2
TLC272CPS
C5C8 .068
Q5B9
2SK209GR
R5J2 1M 1/10W
D5B1
R5N0 470
TP5W
R5J3 F-33K 1/10W
R5J4 F-33K 1/10W
R5L3 3.3K
VASS
SPBRD
CPFWD
CPFGA
CPFGB
QSTP
CTL
CPADJ
L18H
L24H
SL
CPADJ3
GND
STBY5V
SW5V
SW12V
CTLF
SVSERIAL
T/LREC
CPFGA2
DRADJ
OL
OUL
DFF
C2
DRON
TO SERVO
PB5V
C-H
PIX
RECG0
HA-SW
COMP
SPBRD
H-REC
H-PB
L18H
EE
TO HEAD-AMP



KEY0
KEY1
KEY2
KEY3
D5B2
DAN202K
R5H7
100K
R5L0
2.2K
1/10W
B5A0
EFB-RG22C01
R5K9
15K
0.6V
0V
Q5C2
R5K6
27K
1/10W
R5K7
1M
1/10W
R5K8
100K
1/10W
C5D0
2200
5.1V
IC5A5
MC14070BF
C5C4
6.3V
47μ
R5H6
100K
1/10W
Q5C0
C5C5
.01
IC5A3
MC14070BF
5V
2.1~2.8V
2~2.5V
0~5V
R5N1
47K
1/6W or 1/4W
R5N2
3.3K
1/10W
Q5C4
R5H5
3.3K
1/10W
2.5V
(5V)
0~5V
(4.9V)
2.7V
Q5C3
STBY5V
TP5M
R5J7
47K
1/10W
R5M9
470
R5J0
F-47K
1/10W
VR5A0
B-5K
C5C6
16V
47μ
R5J1
F-22K
1/10W
R5J6
F-10K
1/10W
R5J5
F-10K
1/10W
C5C7
Z-.022
1.7V
IC5A2
TLC272CPS
C5C8
.068
Q5B9
2SK209GR
S
D
G
0.4V
R5J2
1M
1/10W
D5B1
R5N0
470
TP5N
R5J3
F-33K
1/10W
R5J4
F-33K
1/10W
R5L3
3.3K
VASS
SPBRD
CPFWD
CPFGA
CPFGB
QSTP
CTL
CPADJ
L18H
L24H
SL
CPADJ3
GND
STBY5V
SW5V
SW12V
CTLF
SVSERIAL
T/LREC
CPFGA2
DRADJ
OL
OUL
DFF
C2
DRON
TO SERVO
PB5V
C-H
PIX
RECGO
HA-SW
COMP
SPBRD
H-REC
H-PB
L18H
EE
SP
ENV
COMP-H
TO HEAD-AMP
COMP-H
RJ2
RJ1
2HCCD
R5L6
10K
1/10W
R5L5
10K
1/10W
JP5A2
CSYNC
GND(FSC)
FSC
GND(FSC)
TO SERVO
SW5V
NC
RJ2
RJ1
NC
GND(FSC)
SW12V
SW5V
GND
9
8
7
6
5
4
3
2
1
(MQC)
MG
PCB-CCD SKEW CG
NC
NC
GND (V-OUT)
VIDEO-OUT
GND (V-IN)
VIDEO-IN
L18H-C
CL REV
C-SKEW
SSRPB
N
SS-VSYNC
PB
NC
CSYNC
ROT
GND (FSC)
FSC
GND (FSC)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
MS
(FPC)
PCB-Y/C(Y/C) SS

291S



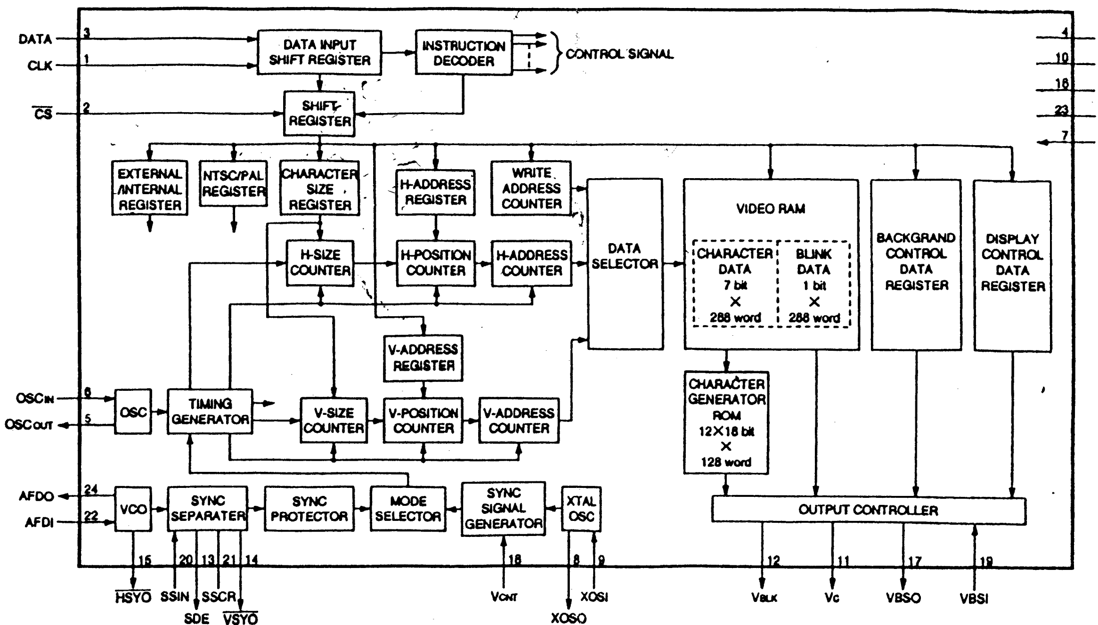
6
Vs
7
OUT1
3
OUT2
5
GND

OUTPUT		MODE
OUT1	OUT2	
∞	∞	STOP
H	L	CW/CCW
L	H	CCW/CW
L	L	BRAKE

edance.

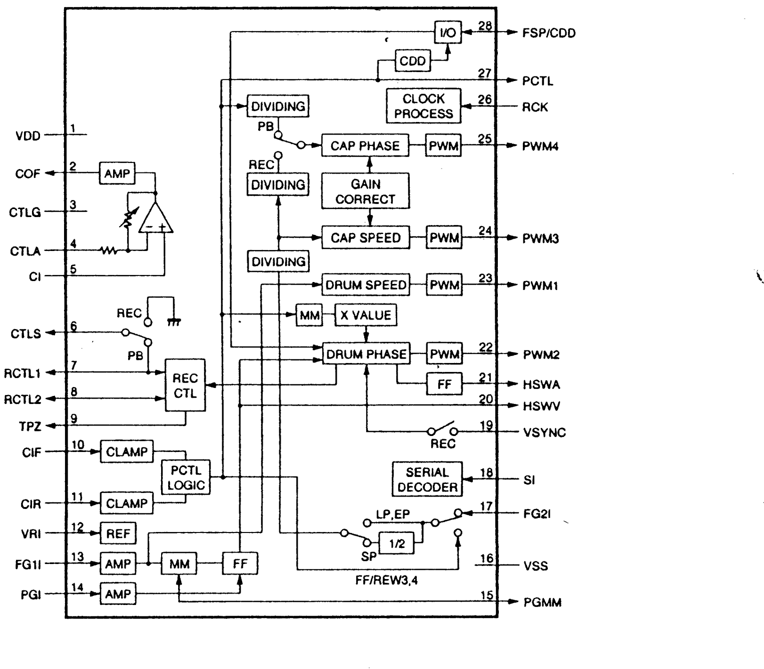
nal activate at "H".

IC2001 μPD6458GT-101



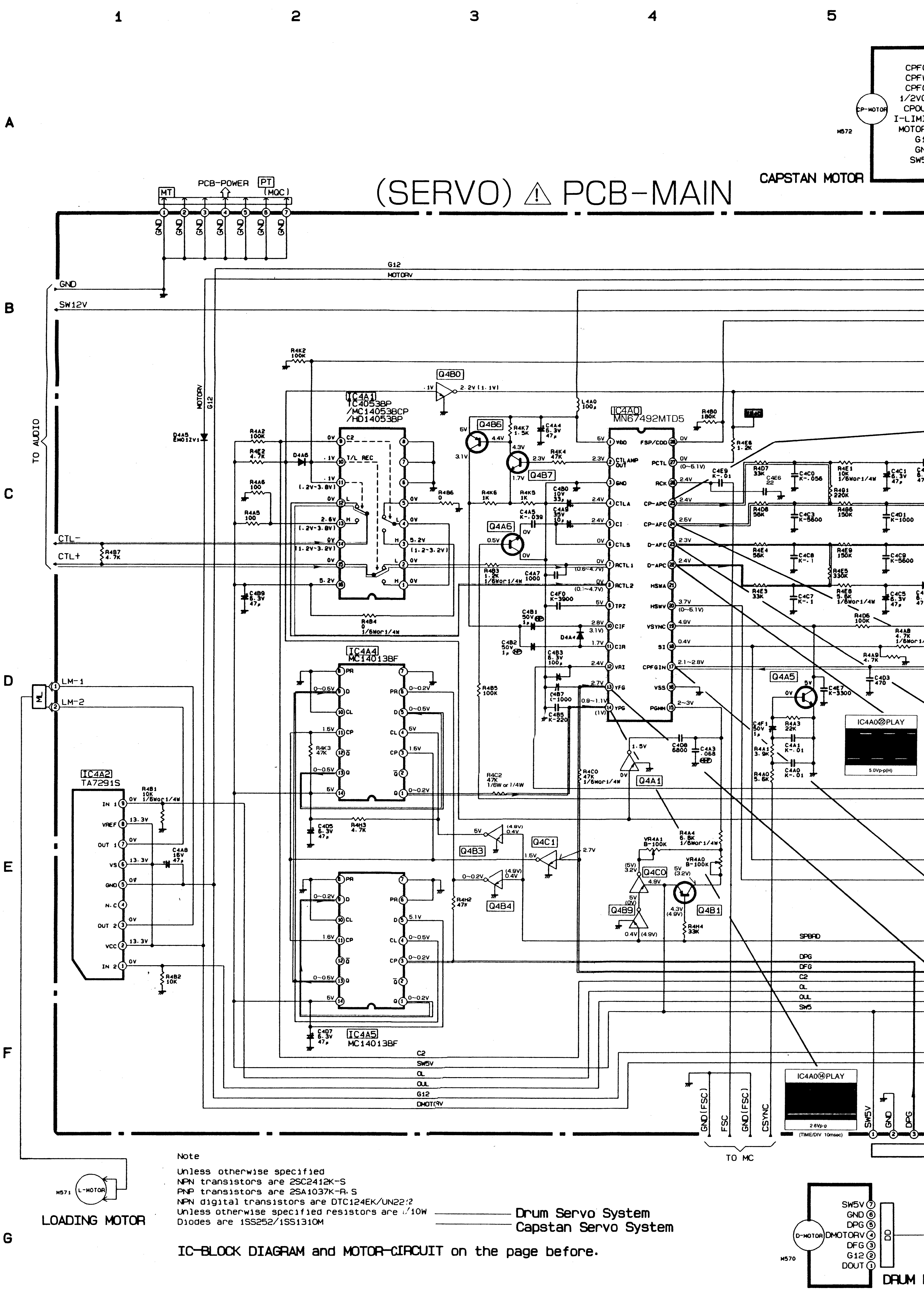
DATA
CLK
CS
3
1
2
DATA INPUT SHIFT REGISTER
INSTRUCTION DECODER
CONTROL SIGNAL
SHIFT REGISTER
4
DVDD
10
DGND
18
AVDD
23
AGND
7
PCL
EXTERNAL /INTERNAL REGISTER
NTSC/PAL REGISTER
CHARACTER SIZE REGISTER
H-ADDRESS REGISTER
WRITE ADDRESS COUNTER
DATA SELECTOR
VIDEO RAM
CHARACTER DATA 7 bit × 288 word
BLINK DATA 1 bit × 288 word
BACKGRAND CONTROL DATA REGISTER
DISPLAY CONTROL DATA REGISTER
H-SIZE COUNTER
H-POSITION COUNTER
H-ADDRESS COUNTER
V-ADDRESS REGISTER
CHARACTER GENERATOR ROM 12X18 bit × 128 word
OSCIN
OSCOUT
6
5
OSC
TIMING GENERATOR
V-SIZE COUNTER
V-POSITION COUNTER
V-ADDRESS COUNTER
AFDO
AFDI
24
22
VCO
SYNC SEPARATER
SYNC PROTECTOR
MODE SELECTOR
SYNC SIGNAL GENERATOR
XTAL OSC
OUTPUT CONTROLLER
15
20
13
21
14
18
8
9
12
11
17
19
HSYO
SSIN
SDE
SSCR
VSYO
VCNT
XOSO
XOSI
VBLK
VC
VBSO
VBSI

IC4A0 MN67492MTD5



VDD
COF
CTLG
CTLA
CI
CTLS
RCTL1
RCTL2
TPZ
CIF
CIR
VRI
FG1I
PGI
1
2
3
4
5
6
7
8
9
10
11
12
13
14
AMP
REC
PB
REC CTL
CLAMP
PCTL LOGIC
CLAMP
REF
AMP
MM
FF
AMP
I/O
CDD
DIVIDING
CLOCK PROCESS
PB
REC
CAP PHASE
PWM
DIVIDING
GAIN CORRECT
CAP SPEED
PWM
DIVIDING
DRUM SPEED
PWM
MM
X VALUE
DRUM PHASE
PWM
FF
REC
SERIAL DECODER
LP,EP
SP
1/2
FF/REW3,4
28
FSP/CDD
27
PCTL
26
RCK
25
PWM4
24
PWM3
23
PWM1
22
PWM2
21
HSWA
20
HSWV
19
VSYNC
18
SI
17
FG2I
16
VSS
15
PGMM

(SERVO) ⚠ PCB-MAIN

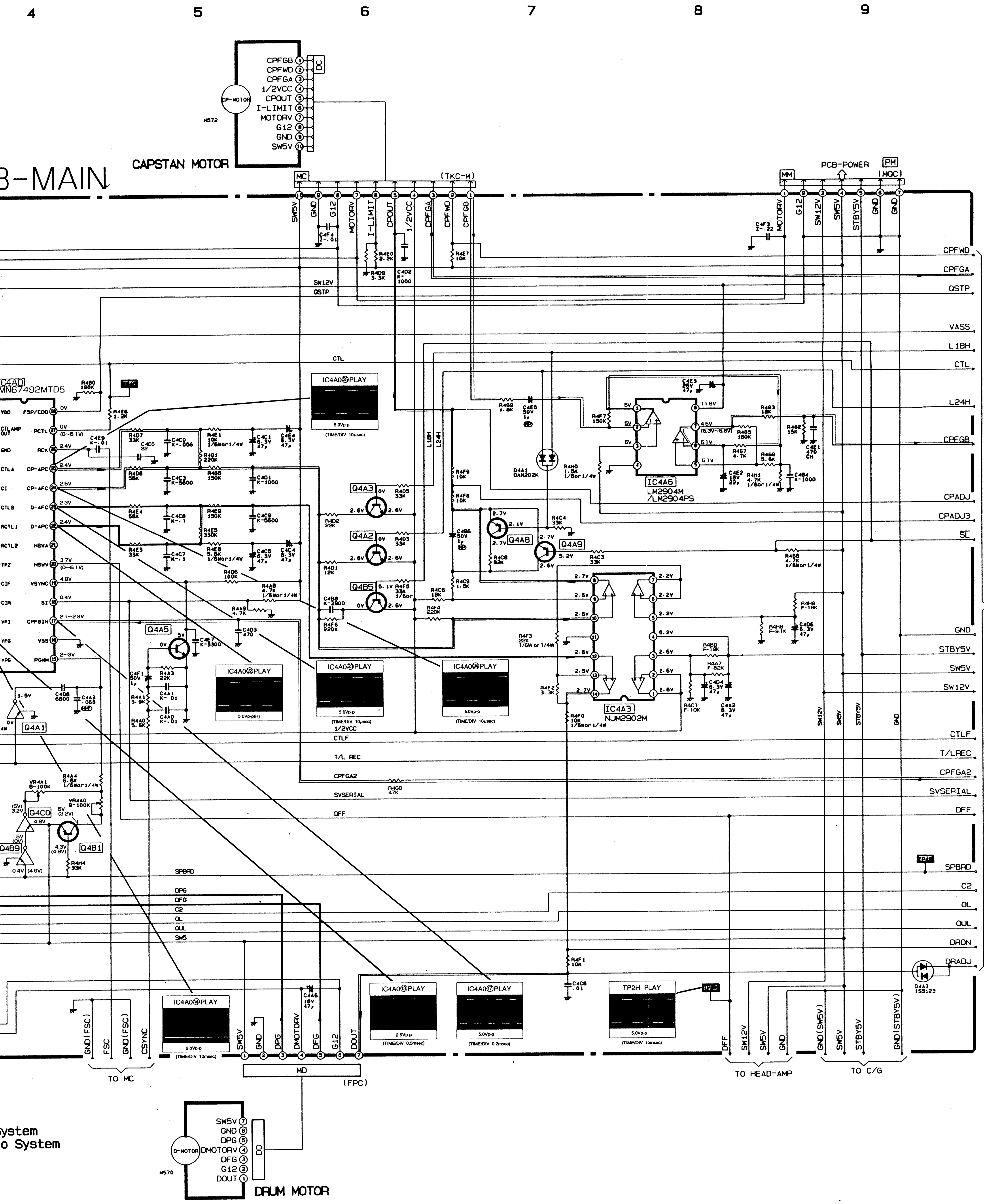

1
2
3
4
5
A
B
C
D
E
F
G
CAPSTAN MOTOR
CP-MOTOR
M572
PCB-POWER
MT
PT
(MQC)
GND
SW12V
TO AUDIO
CTL-
CTL+
LM-1
LM-2
ML
G12
MOTORV
IC4A1
TC4053BP
/MC14053BCP
/HD14053BP
IC4A0
MN67492MTD5
IC4A4
MC14013BF
IC4A5
MC14013BF
IC4A2
TA7291S
Q4B0
Q4B6
Q4B7
Q4A6
Q4A5
Q4A1
Q4B3
Q4B4
Q4C1
Q4C0
Q4B9
Q4B1
IC4A0㉒PLAY
IC4A0⑭PLAY
SPBRD
DPG
DFG
C2
OL
OUL
SW5
SW5V
DMOTORV
GND(FSC)
FSC
CSYNC
TO MC
LOADING MOTOR
L-MOTOR
M571
D-MOTOR
M570
DRUM
SW5V⑦
GND⑥
DPG⑤
DMOTORV④
DFG③
G12②
DOUT①

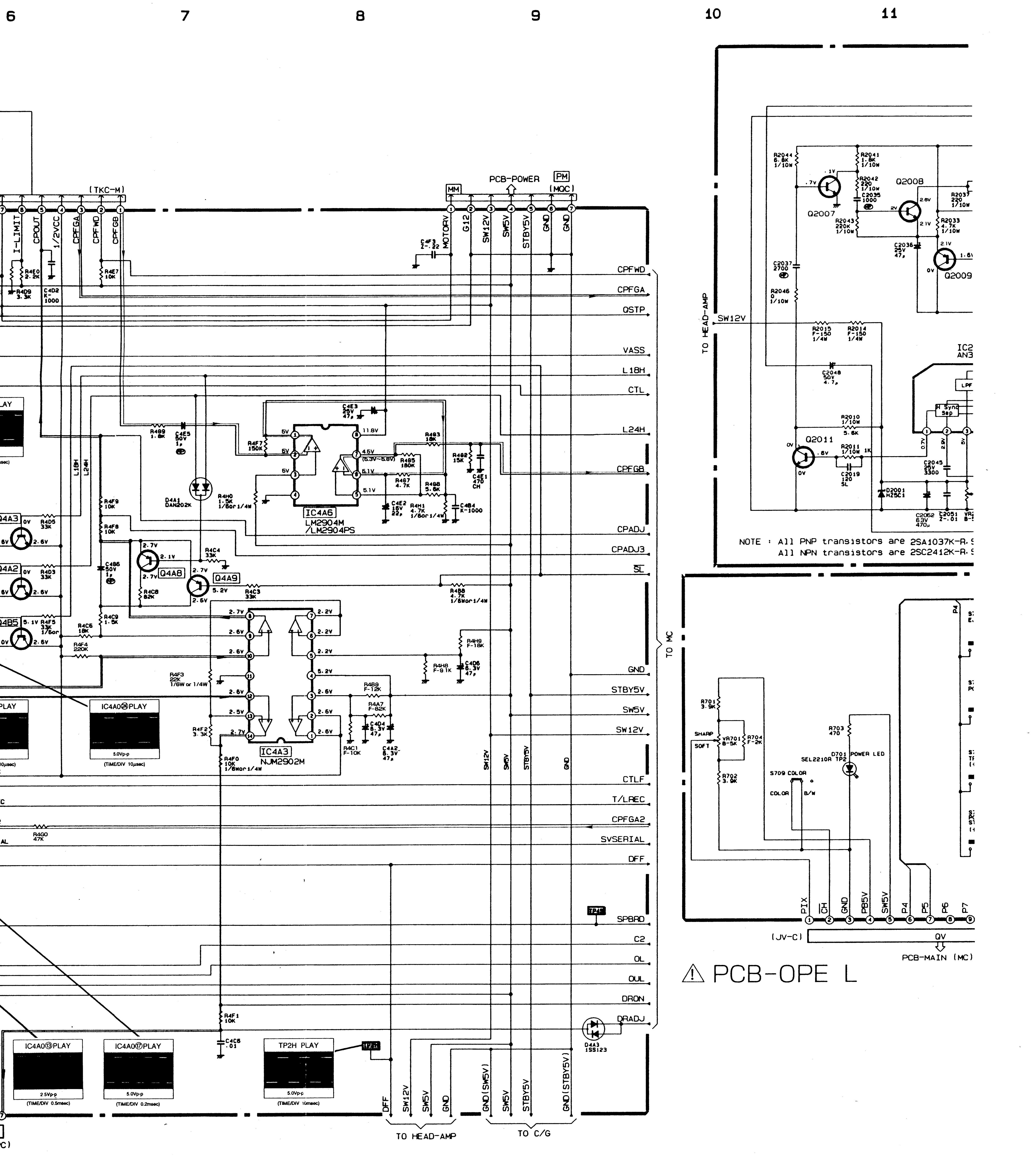
Note

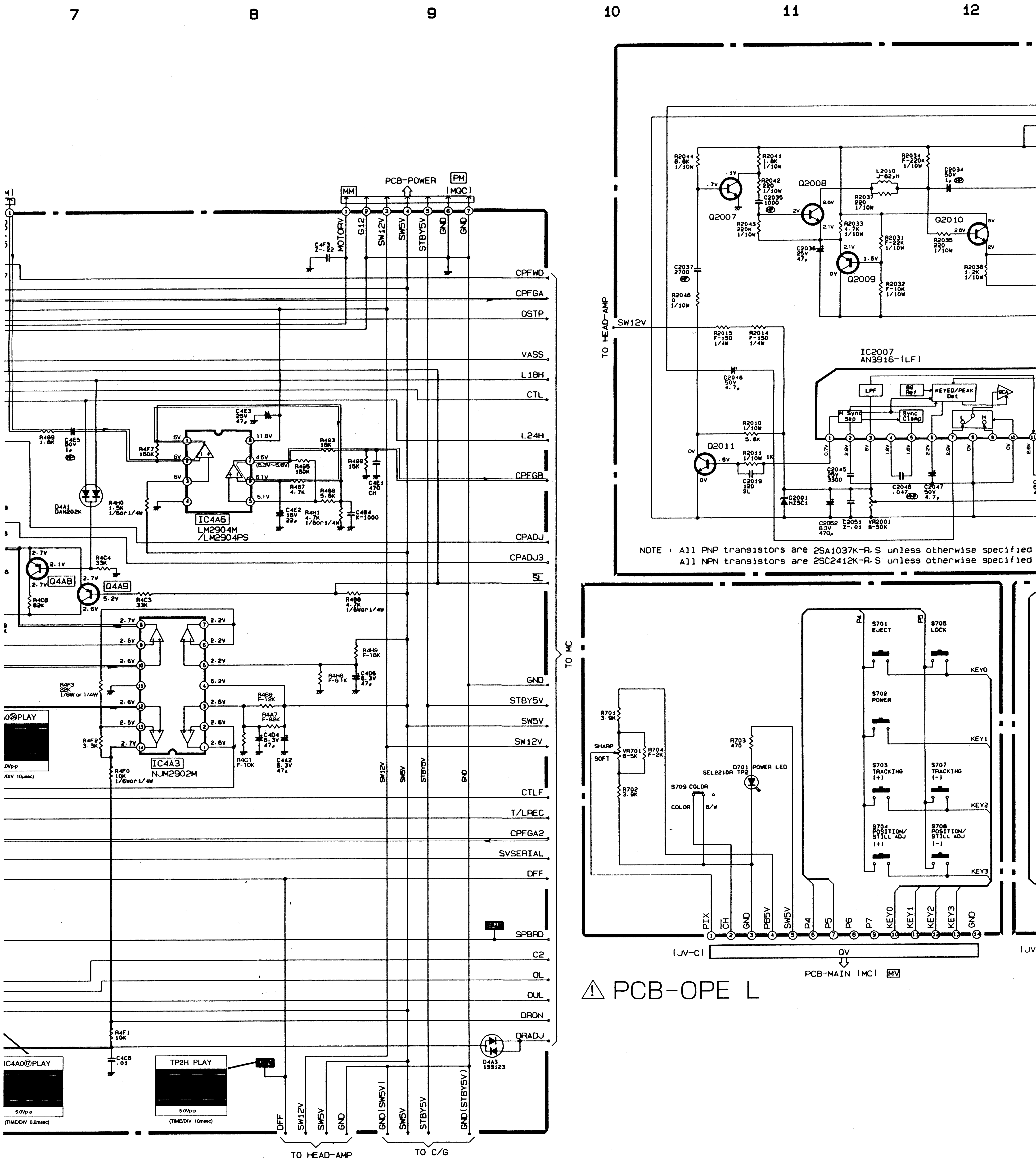
Unless otherwise specified
NPN transistors are 2SC2412K-S
PNP transistors are 2SA1037K-R·S
NPN digital transistors are DTC124EK/UN22:2
Unless otherwise specified resistors are 1/10W
Diodes are 1SS252/1SS131OM

Drum Servo System
Capstan Servo System

IC-BLOCK DIAGRAM and MOTOR-CIRCUIT on the page before.

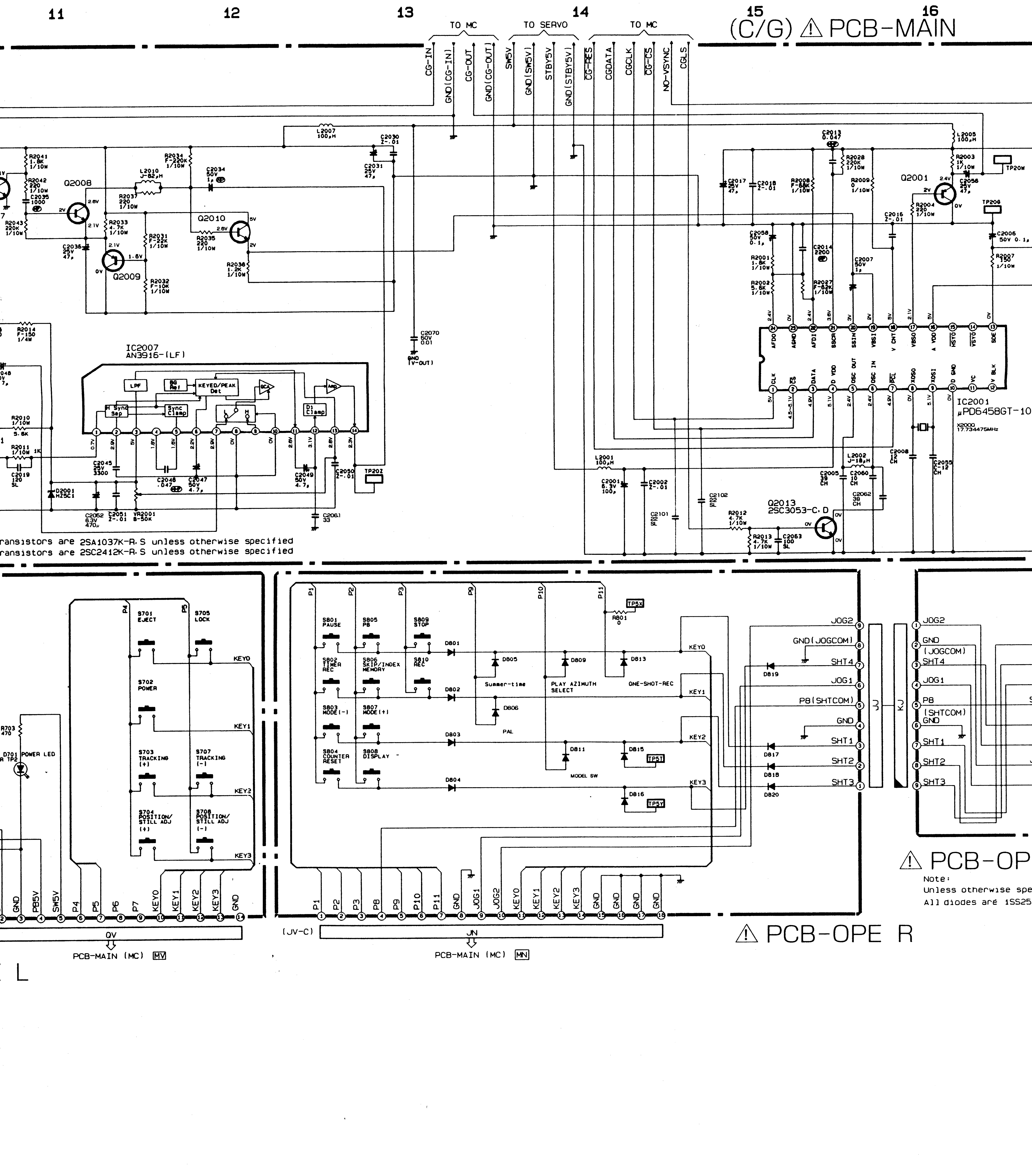

4
5
6
7
8
9
B-MAIN
CAPSTAN MOTOR
CP-MOTOR
M572
CPFGB
CPFWD
CPFGA
1/2VCC
CPOUT
I-LIMIT
MOTORV
G12
GND
SW5V
DC
MC
(TKC-M)
MM
PCB-POWER
PM
(MQC)
IC4A0
MN67492MTD5
IC4A6
LM2904M
/LM2904PS
IC4A3
NJM2902M
Q4A3
Q4A2
Q4B5
Q4A5
Q4A8
Q4A9
Q4A1
Q4C0
Q4B1
Q4B9
D4A1
DAN202K
D4A3
1SS123
IC4A0㉘PLAY
IC4A0㉒PLAY
IC4A0㉓PLAY
IC4A0㉔PLAY
IC4A0⑭PLAY
IC4A0⑬PLAY
IC4A0⑰PLAY
TP2H PLAY
CPFWD
CPFGA
QSTP
VASS
L18H
CTL
L24H
CPFGB
CPADJ
CPADJ3
SL
GND
STBY5V
SW5V
SW12V
CTLF
T/LREC
CPFGA2
SVSERIAL
DFF
SPBRD
C2
OL
OUL
DRON
DRADJ
TO MC
MD
(FPC)
TO HEAD-AMP
TO C/G
DRUM MOTOR
D-MOTOR
M570
SW5V
GND
DPG
DMOTORV
DFG
G12
DOUT
DD
ystem
o System

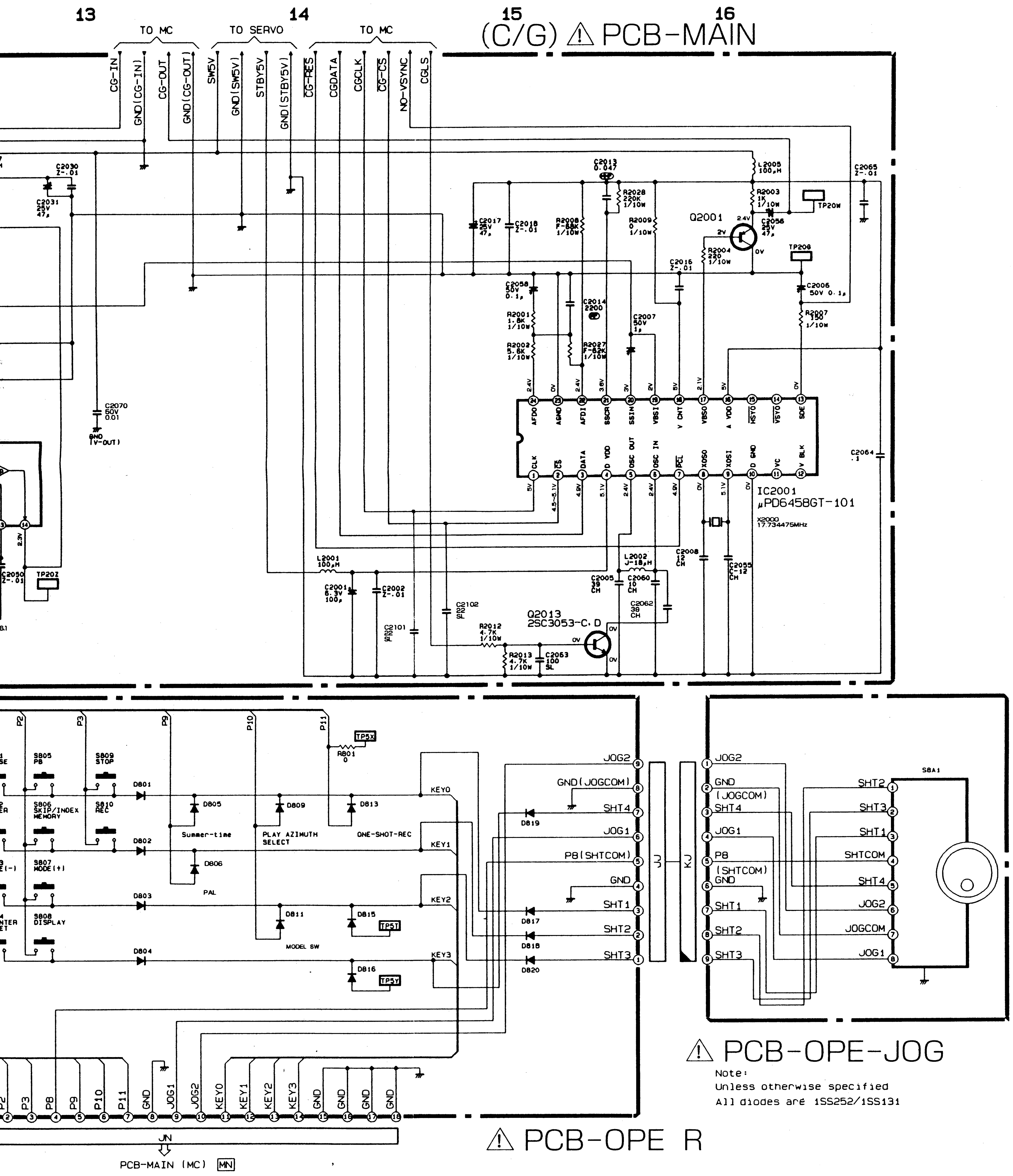

6
7
8
9
10
11
(TKC-M)
I-LIMIT
CPOUT
1/2VCC
CPFGA
CPFWD
CPFGB
PCB-POWER
PM
MM
(MQC)
MOTORV
G12
SW12V
SW5V
STBY5V
GND
GND
CPFWD
CPFGA
QSTP
VASS
L18H
CTL
L24H
CPFGB
CPADJ
CPADJ3
SL
GND
STBY5V
SW5V
SW12V
CTLF
T/LREC
CPFGA2
SVSERIAL
DFF
SPBRD
C2
OL
OUL
DRON
DRADJ
TO MC
IC4A6
LM2904M
/LM2904PS
IC4A3
NJM2902M
Q4A8
Q4A9
D4A1
DAN202K
D4A3
1SS123
IC4A0㉔PLAY
IC4A0⑬PLAY
IC4A0⑰PLAY
TP2H PLAY
5.0Vp-p
2.5Vp-p
(TIME/DIV 10μsec)
(TIME/DIV 0.5msec)
(TIME/DIV 0.2msec)
(TIME/DIV 10msec)
TP4E
DFF
SW12V
SW5V
GND
GND(SW5V)
SW5V
STBY5V
GND(STBY5V)
TO HEAD-AMP
TO C/G
TO HEAD-AMP
SW12V
Q2007
Q2008
Q2009
Q2011
D2001
HZ5C1
IC2
AN3
LPF
H Sync Sep
NOTE : All PNP transistors are 2SA1037K-R.S
All NPN transistors are 2SC2412K-R.S
R701 3.9K
VR701 B-5K
R704 F-2K
R702 3.9K
SHARP
SOFT
R703 470
D701 POWER LED
SEL2210R TP2
S709 COLOR
COLOR
B/W
PIX
CH
GND
PB5V
SW5V
P4
P5
P6
P7
(JV-C)
QV
PCB-MAIN (MC)
⚠ PCB-OPE L


7
8
9
10
11
12
PCB-POWER
MM
PM
(MQC)
MOTORV
G12
SW12V
SW5V
STBY5V
GND
GND
CPFWD
CPFGA
QSTP
VASS
L18H
CTL
L24H
CPFGB
CPADJ
CPADJ3
SL
GND
STBY5V
SW5V
SW12V
CTLF
T/LREC
CPFGA2
SVSERIAL
DFF
SPBRD
C2
OL
OUL
DRON
DRADJ
TO MC
IC4A6
LM2904M
/LM2904PS
IC4A3
NJM2902M
Q4A8
Q4A9
D4A1
DAN202K
D4A3
1SS123
IC4A0⑳PLAY
IC4A0⑰PLAY
TP2H PLAY
5.0Vp-p
(TIME/DIV 0.2msec)
(TIME/DIV 10msec)
DFF
SW12V
SW5V
GND
GND(SW5V)
SW5V
STBY5V
GND(STBY5V)
TO HEAD-AMP
TO C/G
TO HEAD-AMP
SW12V
Q2007
Q2008
Q2009
Q2010
Q2011
IC2007
AN3916-(LF)
LPF
BG Ref
KEYED/PEAK Det
Sync Sep
Sync Clamp
D2001
HZ5C1
VR2001
B-50K
S701 EJECT
S705 LOCK
S702 POWER
S703 TRACKING (+)
S707 TRACKING (-)
S704 POSITION/ STILL ADJ (+)
S706 POSITION/ STILL ADJ (-)
KEY0
KEY1
KEY2
KEY3
SHARP
SOFT
VR701 B-5K
D701 POWER LED
SEL2210R TP2
S709 COLOR
COLOR
B/W
PIX
CH
GND
PB5V
SW5V
P4
P5
P6
P7
KEY0
KEY1
KEY2
KEY3
GND
(JV-C)
QV
PCB-MAIN (MC)
MV
(JV

NOTE : All PNP transistors are 2SA1037K-R,S unless otherwise specified
All NPN transistors are 2SC2412K-R,S unless otherwise specified

⚠ PCB-OPE L


11
12
13
14
15
16
(C/G) ⚠ PCB-MAIN
TO MC
TO SERVO
TO MC
CG-IN
GND(CG-IN)
CG-OUT
GND(CG-OUT)
SW5V
GND(SW5V)
STBY5V
GND(STBY5V)
CG-RES
CGDATA
CGCLK
CG-CS
NO-VSYNC
CGLS
Q2008
Q2009
Q2010
Q2001
Q2013
2SC3053-C, D
IC2007
AN3916-(LF)
LPF
BG Ref
KEYED/PEAK Det
H Sync Sep
Sync Clamp
Dl Clamp
Amp
IC2001
μPD6458GT-10
X2000
17.734475MHz
TP20W
TP206
TP207
AFDO
AGND
AFDI
SSCR
SSIN
VBSI
V CNT
VBSO
A VDD
HSYO
VSYO
SDE
CLK
CS
DATA
D VDD
OSC OUT
OSC IN
RCL
XOSO
XOSI
D GND
VC
V BLK
L2007 100μH
L2010 J-82μH
L2005 100μH
L2001 100μH
L2002 J-18μH
VR2001 B-50K
D2001 HZ5C1
GND (V-OUT)
Transistors are 2SA1037K-R, S unless otherwise specified
Transistors are 2SC2412K-R, S unless otherwise specified
S701 EJECT
S705 LOCK
S702 POWER
S703 TRACKING (+)
S707 TRACKING (-)
S704 POSITION/ STILL ADJ (+)
S708 POSITION/ STILL ADJ (-)
D701 POWER LED
R703 470
KEY0
KEY1
KEY2
KEY3
S801 PAUSE
S805 PB
S809 STOP
S802 TIMER REC
S806 SKIP/INDEX MEMORY
S810 REC
S803 MODE(-)
S807 MODE(+)
S804 COUNTER RESET
S808 DISPLAY
D801
D802
D803
D804
D805
D806
D809
D811
D813
D815
D816
D817
D818
D819
D820
Summer-time
PAL
PLAY AZIMUTH SELECT
ONE-SHOT-REC
MODEL SW
TP5X
TP5T
TP5Y
R801 0
JOG2
GND(JOGCOM)
SHT4
JOG1
P8(SHTCOM)
GND
SHT1
SHT2
SHT3
JJ
KJ
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
PB5V
SW5V
QV
JN
(JV-C)
PCB-MAIN (MC) MV
PCB-MAIN (MC) MN
⚠ PCB-OPE R
⚠ PCB-OP
L
Note:
Unless otherwise spe
All diodes are 1SS25

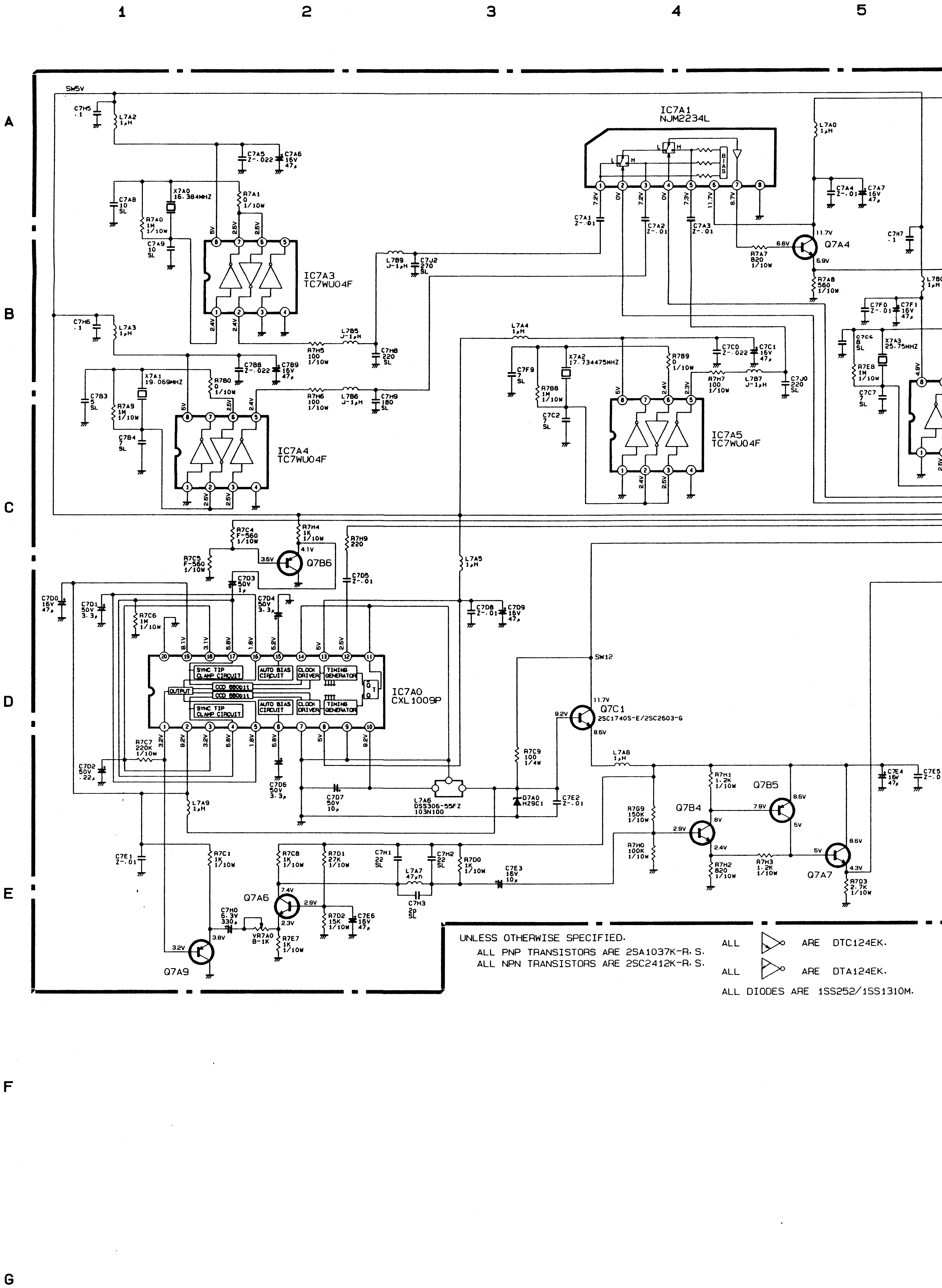

13
14
15
16
TO MC
TO SERVO
TO MC
CG-IN
GND(CG-IN)
CG-OUT
GND(CG-OUT)
SW5V
GND(SW5V)
STBY5V
GND(STBY5V)
CG-RES
CGDATA
CGCLK
CG-CS
NO-VSYNC
CGLS
C2030 Z-.01
C2031 25V 47μ
C2070 50V 0.01
GND (V-OUT)
TP207
C2050 Z-.01
C2013 0.047
R2028 220K 1/10W
L2005 100μH
R2003 1K 1/10W
C2065 Z-.01
TP20W
C2017 25V 47μ
C2018 Z-.01
R2008 F-68K 1/10W
R2009 0 1/10W
Q2001
C2056 25V 47μ
R2004 220 1/10W
C2016 Z-.01
TP208
C2006 50V 0.1μ
C2058 50V 0.1μ
C2014 2200
C2007 50V 1μ
R2007 150 1/10W
R2001 1.8K 1/10W
R2002 5.6K 1/10W
R2027 F-82K 1/10W
AFDO
AGND
AFDI
SBCR
SSIN
VBSI
V CNT
VBSO
A VDD
HSYO
VSYO
SDE
CLK
CS
DATA
D VDD
OSC OUT
OSC IN
PCL
XOSO
XOSI
D GND
VC
V BLK
C2064 .1
IC2001
μPD6458GT-101
X2000 17.734475MHz
L2001 100μH
C2001 6.3V 100μ
C2002 Z-.01
C2102 22 SL
C2101 22 SL
L2002 J-18μH
C2008 12 CH
C2055 C-12 CH
C2005 39 CH
C2060 10 CH
C2062 39 CH
Q2013
2SC3053-C,D
R2012 4.7K 1/10W
R2013 4.7K 1/10W
C2063 100 SL
P2
P3
P9
P10
P11
TP5X
R801 0
S805 PB
S809 STOP
D801
D805
D809
D813
KEY0
S806 SKIP/INDEX MEMORY
S810 REC
Summer-time
PLAY AZIMUTH SELECT
ONE-SHOT-REC
D802
KEY1
D806
S807 MODE(+)
PAL
D803
KEY2
D811
D815
TP5T
S808 DISPLAY
MODEL SW
D804
KEY3
D816
TP5Y
JOG2
GND(JOGCOM)
SHT4
JOG1
P8(SHTCOM)
GND
SHT1
SHT2
SHT3
D819
D817
D818
D820
JJ
KJ
JOG2
GND (JOGCOM)
SHT4
JOG1
P8 (SHTCOM)
GND
SHT1
SHT2
SHT3
S8A1
SHT2
SHT3
SHT1
SHTCOM
SHT4
JOG2
JOGCOM
JOG1
P2
P3
P8
P9
P10
P11
GND
JOG1
JOG2
KEY0
KEY1
KEY2
KEY3
GND
GND
GND
GND
JN
PCB-MAIN (MC) MN

(C/G) ⚠ PCB-MAIN

⚠ PCB-OPE-JOG

Note:
Unless otherwise specified
All diodes are 1SS252/1SS131

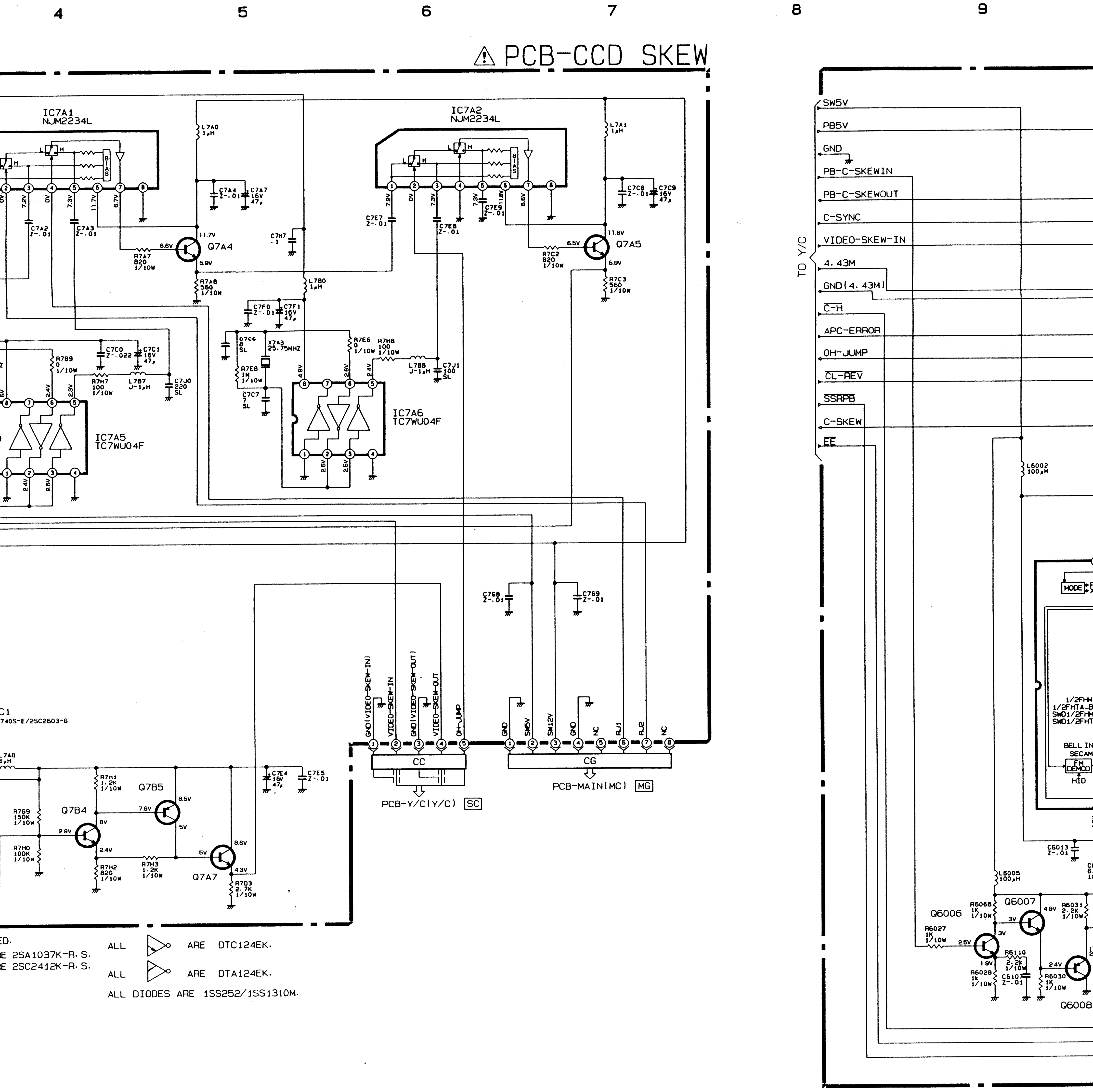
⚠ PCB-OPE R


1
2
3
4
5
A
B
C
D
E
F
G
SW5V
C7H5 .1
L7A2 1μH
C7A5 Z-.022
C7A6 16V 47μ
C7A8 10 SL
X7A0 16.384MHZ
R7A0 1M 1/10W
C7A9 10 SL
R7A1 0 1/10W
IC7A3 TC7WU04F
C7H6 .1
L7A3 1μH
L7B9 J-1μH
C7J2 270 SL
L7B5 J-1μH
R7H5 100 1/10W
C7H8 220 SL
C7B8 Z-.022
C7B9 16V 47μ
X7A1 19.069MHZ
C7B3 5 SL
R7A9 1M 1/10W
R7B0 0 1/10W
C7B4 7 SL
R7H6 100 1/10W
L7B6 J-1μH
C7H9 180 SL
IC7A4 TC7WU04F
IC7A1 NJM2234L
BIAS
C7A1 Z-.01
C7A2 Z-.01
C7A3 Z-.01
R7A7 820 1/10W
Q7A4
R7A8 560 1/10W
L7A0 1μH
C7A4 Z-.01
C7A7 16V 47μ
C7H7 .1
L7A4 1μH
C7F9 7 SL
X7A2 17.734475MHZ
R7B8 1M 1/10W
C7C2 7 SL
R7B9 0 1/10W
C7C0 Z-.022
C7C1 16V 47μ
R7H7 100 1/10W
L7B7 J-1μH
C7J0 220 SL
IC7A5 TC7WU04F
C7F0 Z-.01
C7F1 16V 47μ
C7C6 8 SL
X7A3 25.75MHZ
R7E8 1M 1/10W
C7C7 7 SL
R7C4 F-560 1/10W
R7C5 F-560 1/10W
R7H4 1K 1/10W
Q7B6
R7H9 220
C7D5 Z-.01
C7D3 50V 1μ
C7D4 50V 3.3μ
L7A5 1μH
C7D0 16V 47μ
C7D1 50V 3.3μ
R7C6 1M 1/10W
C7D8 Z-.01
C7D9 16V 47μ
SYNC TIP CLAMP CIRCUIT
AUTO BIAS CIRCUIT
CLOCK DRIVER
TIMING GENERATOR
CCD 680bit
OUTPUT
IC7A0 CXL1009P
R7C7 220K 1/10W
C7D2 50V .22μ
C7D6 50V 3.3μ
C7D7 50V 10μ
L7A6 DSS306-55FZ 103N100
D7A0 HZ9C1
R7C9 100 1/4W
C7E2 Z-.01
SW12
Q7C1 2SC1740S-E/2SC2603-G
L7A8 1μH
L7A9 1μH
C7E1 Z-.01
R7C1 1K 1/10W
R7C8 1K 1/10W
R7D1 27K 1/10W
C7H1 22 SL
C7H2 22 SL
R7D0 1K 1/10W
L7A7 47μH
C7H3 20 SL
C7E3 16V 10μ
Q7A6
C7H0 6.3V 330μ
VR7A0 B-1K
R7E7 1K 1/10W
R7D2 15K 1/10W
C7E6 16V 47μ
Q7A9
R7G9 150K 1/10W
R7H0 100K 1/10W
R7H1 1.2K 1/10W
Q7B4
Q7B5
R7H2 820 1/10W
R7H3 1.2K 1/10W
Q7A7
R7D3 2.7K 1/10W
C7E4 16V 47μ
C7E5 Z-.0

UNLESS OTHERWISE SPECIFIED.
ALL PNP TRANSISTORS ARE 2SA1037K-R, S.
ALL NPN TRANSISTORS ARE 2SC2412K-R, S.

ALL ▷ ARE DTC124EK.
ALL ▷ ARE DTA124EK.
ALL DIODES ARE 1SS252/1SS1310M.

⚠ PCB-CCD SKEW


4
5
6
7
8
9
IC7A1
NJM2234L
IC7A2
NJM2234L
BIAS
L7A0
1μH
L7A1
1μH
C7A4
Z-.01
C7A7
16V
47μ
C7C8
Z-.01
C7C9
16V
47μ
C7A2
Z-.01
C7A3
Z-.01
C7E7
Z-.01
C7E8
Z-.01
C7E9
Z-.01
C7H7
.1
Q7A4
Q7A5
R7A7
820
1/10W
R7C2
820
1/10W
R7A8
560
1/10W
R7C3
560
1/10W
11.7V
6.6V
5.9V
11.8V
6.5V
6.9V
L780
1μH
C7F0
Z-.01
C7F1
16V
47μ
C7C6
8
SL
X7A3
25.75MHZ
R7E8
1M
1/10W
C7C7
7
SL
R7E6
0
1/10W
R7H8
100
1/10W
L788
J-1μH
C7J1
100
SL
IC7A6
TC7WU04F
R789
0
1/10W
C7C0
Z-.022
C7C1
16V
47μ
R7H7
100
1/10W
L787
J-1μH
C7J0
220
SL
IC7A5
TC7WU04F
C768
Z-.01
C769
Z-.01
GND(VIDEO-SKEW-IN)
VIDEO-SKEW-IN
GND(VIDEO-SKEW-OUT)
VIDEO-SKEW-OUT
OH-JUMP
GND
SW5V
SW12V
GND
NC
RJ1
RJ2
NC
CC
CG
PCB-Y/C(Y/C) SC
PCB-MAIN(MC) MG
C1
740S-E/2SC2603-G
L7A8
1μH
R7H1
1.2K
1/10W
Q7B5
C7E4
16V
47μ
C7E5
Z-.01
R7G9
150K
1/10W
Q7B4
R7H0
100K
1/10W
R7H2
820
1/10W
R7H3
1.2K
1/10W
Q7A7
R703
2.7K
1/10W
8.6V
7.9V
8V
2.9V
5V
2.4V
4.3V
TO Y/C
SW5V
PB5V
GND
PB-C-SKEWIN
PB-C-SKEWOUT
C-SYNC
VIDEO-SKEW-IN
4.43M
GND(4.43M)
C-H
APC-ERROR
OH-JUMP
CL-REV
SSRPB
C-SKEW
EE
L6002
100μH
MODE
1/2FHM
1/2FHTA_B
SWD1/2FHM
SWD1/2FHT
BELL IN
SECAM
FM DEMOD
HID
C6013
Z-.01
L6005
100μH
Q6006
Q6007
Q6008
R6068
1K
1/10W
R6027
1K
1/10W
R6028
1K
1/10W
R6031
2.2K
1/10W
R6110
2.2K
1/10W
C6107
Z-.01
R6030
1K
1/10W
4.8V
3V
2.5V
1.9V
2.4V

ED.

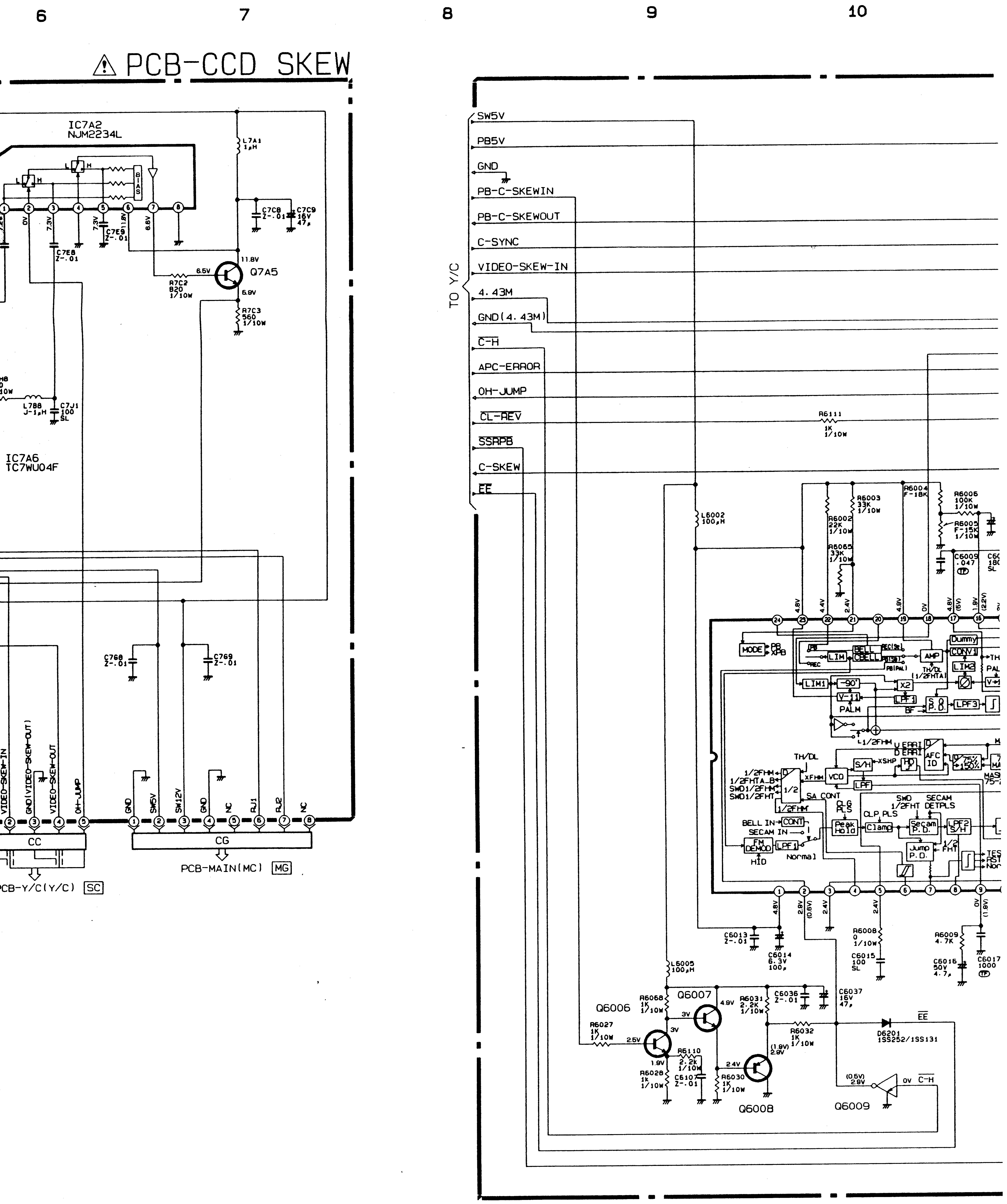
E 2SA1037K-R, S.

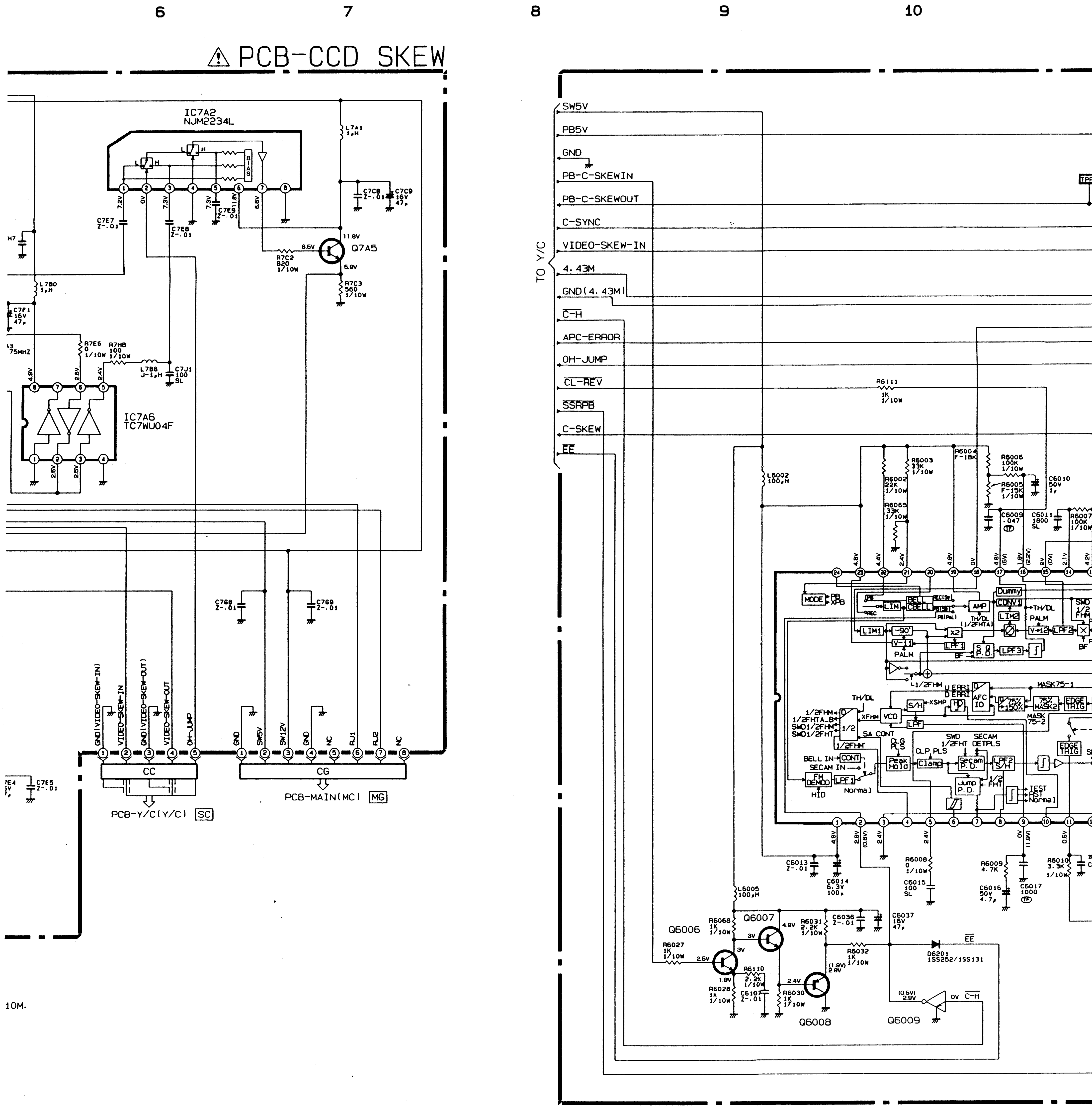
E 2SC2412K-R, S.

ALL ▷ ARE DTC124EK.

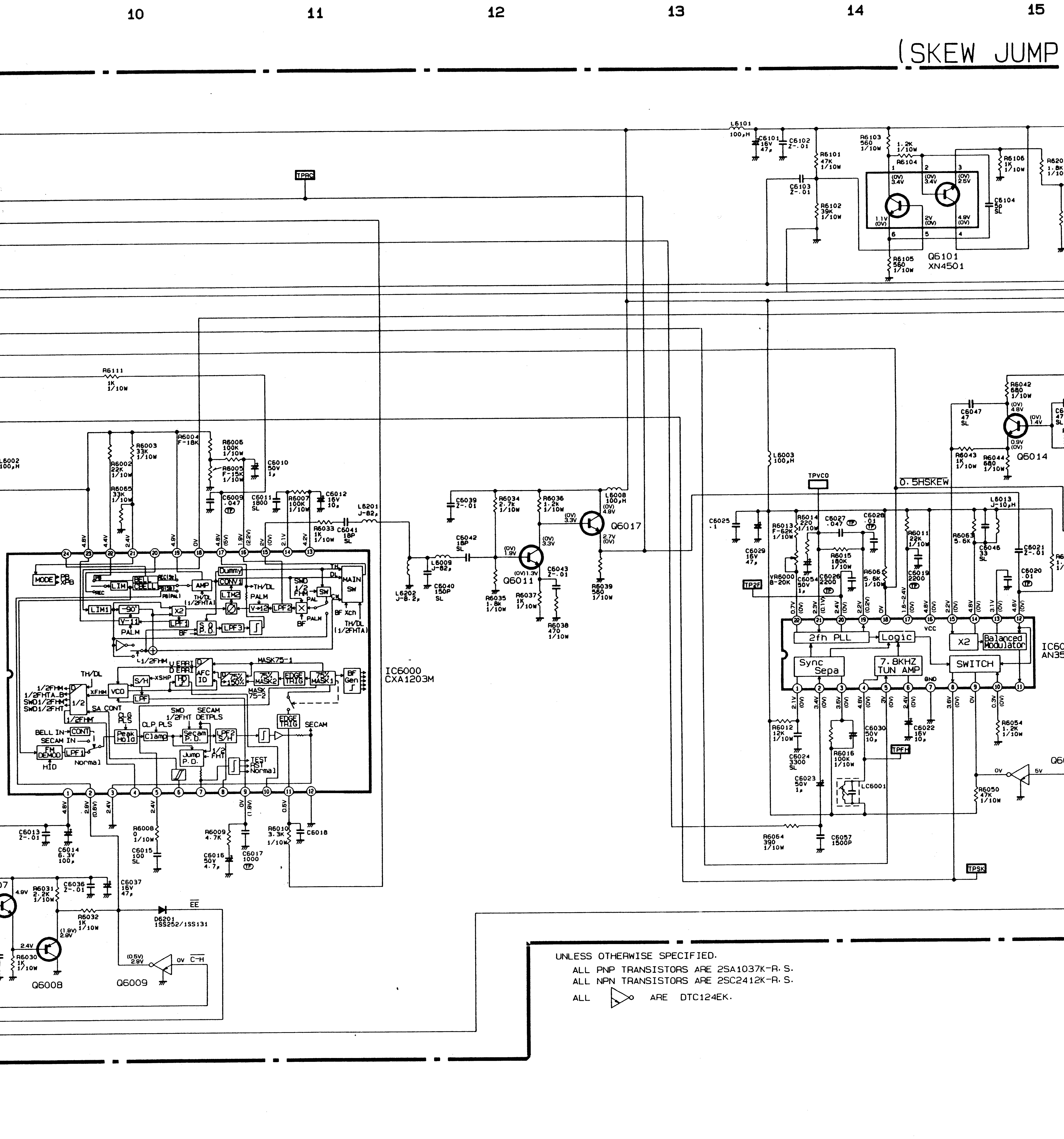
ALL ▷ ARE DTA124EK.

ALL DIODES ARE 1SS252/1SS1310M.


6
7
8
9
10
⚠ PCB-CCD SKEW
IC7A2
NJM2234L
L7A1
1μH
C7C8
Z-.01
C7C9
16V
47μ
C7E8
Z-.01
C7E9
Z-.01
Q7A5
11.8V
6.5V
5.9V
R7C2
820
1/10W
R7C3
560
1/10W
L788
J-1μH
C7J1
100
SL
IC7A6
TC7WU04F
C768
Z-.01
C769
Z-.01
VIDEO-SKEW-IN
GND(VIDEO-SKEW-OUT)
VIDEO-SKEW-OUT
OH-JUMP
CC
PCB-Y/C(Y/C) SC
GND
SW5V
SW12V
GND
NC
RJ1
RJ2
NC
CG
PCB-MAIN(MC) MG
TO Y/C
SW5V
PB5V
GND
PB-C-SKEWIN
PB-C-SKEWOUT
C-SYNC
VIDEO-SKEW-IN
4.43M
GND(4.43M)
C-H
APC-ERROR
OH-JUMP
CL-REV
SSRPB
C-SKEW
EE
R6111
1K
1/10W
L6002
100μH
R6002
22K
1/10W
R6003
33K
1/10W
R6065
33K
1/10W
R6004
F-18K
R6006
100K
1/10W
R6005
F-15K
1/10W
C6009
.047
MODE
LIM
BELL
CBELL
AMP
LIM1
-90°
X2
LPF1
LPF3
LIM2
PALM
VCO
S/H
LPF
AFC
ID
1/2
Peak Hold
Clamp
Secam P.D.
LPF2 S/H
Jump P.D.
FM DEMOD
LPF1
Normal
HID
BELL IN
SECAM IN
SA CONT
TH/DL
C6013
Z-.01
C6014
6.3V
100μ
R6008
0
1/10W
C6015
100
SL
R6009
4.7K
C6016
50V
4.7μ
C6017
1000
L6005
100μH
Q6006
Q6007
Q6008
Q6009
R6068
1K
1/10W
R6027
1K
1/10W
R6028
1K
1/10W
R6110
2.2K
1/10W
C6107
Z-.01
R6031
2.2K
1/10W
C6036
Z-.01
C6037
16V
47μ
R6032
1K
1/10W
R6030
1K
1/10W
D6201
1SS252/1SS131
EE
C-H


6
7
8
9
10
⚠ PCB-CCD SKEW
IC7A2
NJM2234L
BIAS
Q7A5
IC7A6
TC7WU04F
L7A1 1μH
L780 1μH
L788
R7C2 820 1/10W
R7C3 560 1/10W
R7E6
R7H8 100 1/10W
C7C8
C7C9 16V 47μ
C7E7 Z-.01
C7E8 Z-.01
C7E9 Z-.01
C7F1 16V 47μ
C7J1 100 SL
C768 Z-.01
C769 Z-.01
C7E5 Z-.01
GND(VIDEO-SKEW-IN)
VIDEO-SKEW-IN
GND(VIDEO-SKEW-OUT)
VIDEO-SKEW-OUT
OH-JUMP
CC
PCB-Y/C(Y/C) SC
GND
SW5V
SW12V
GND
NC
RJ1
RJ2
NC
CG
PCB-MAIN(MC) MG
TO Y/C
SW5V
PB5V
GND
PB-C-SKEWIN
PB-C-SKEWOUT
C-SYNC
VIDEO-SKEW-IN
4.43M
GND(4.43M)
C-H
APC-ERROR
OH-JUMP
CL-REV
SSRPB
C-SKEW
EE
R6111 1K 1/10W
L6002 100μH
L6005 100μH
R6002 22K 1/10W
R6003 33K 1/10W
R6004 F-18K
R6005 F-15K 1/10W
R6006 100K 1/10W
R6007 100K 1/10W
R6055 33K 1/10W
C6009 .047
C6010 50V 1μ
C6011 1800 SL
MODE PB XPB
LIM
BELL
AMP
LIM1
LIM2
-90°
V-11
X2
LPF1
S/H
LPF3
PALM
TH/DL
VCO
LPF
MASK75-1
MASK75-2
EDGE TRIG
SA CONT
BELL IN
SECAM IN
FM DEMOD
HID
Normal
Peak Hold
Clamp
Secam P.D.
Jump P.D.
LPF2
TEST
RST
Normal
C6013 Z-.01
C6014 6.3V 100μ
C6015 100 SL
C6016 50V 4.7μ
C6017 1000
R6008 0 1/10W
R6009 4.7K
R6010 3.3K 1/10W
Q6006
Q6007
Q6008
Q6009
R6027 1K 1/10W
R6028 1K 1/10W
R6030 1K 1/10W
R6031 2.2K 1/10W
R6032 1K 1/10W
R6058 1K 1/10W
R6110 2.2K 1/10W
C6036 Z-.01
C6037 16V 47μ
D6201 1SS252/1SS131
EE
C-H
10M.

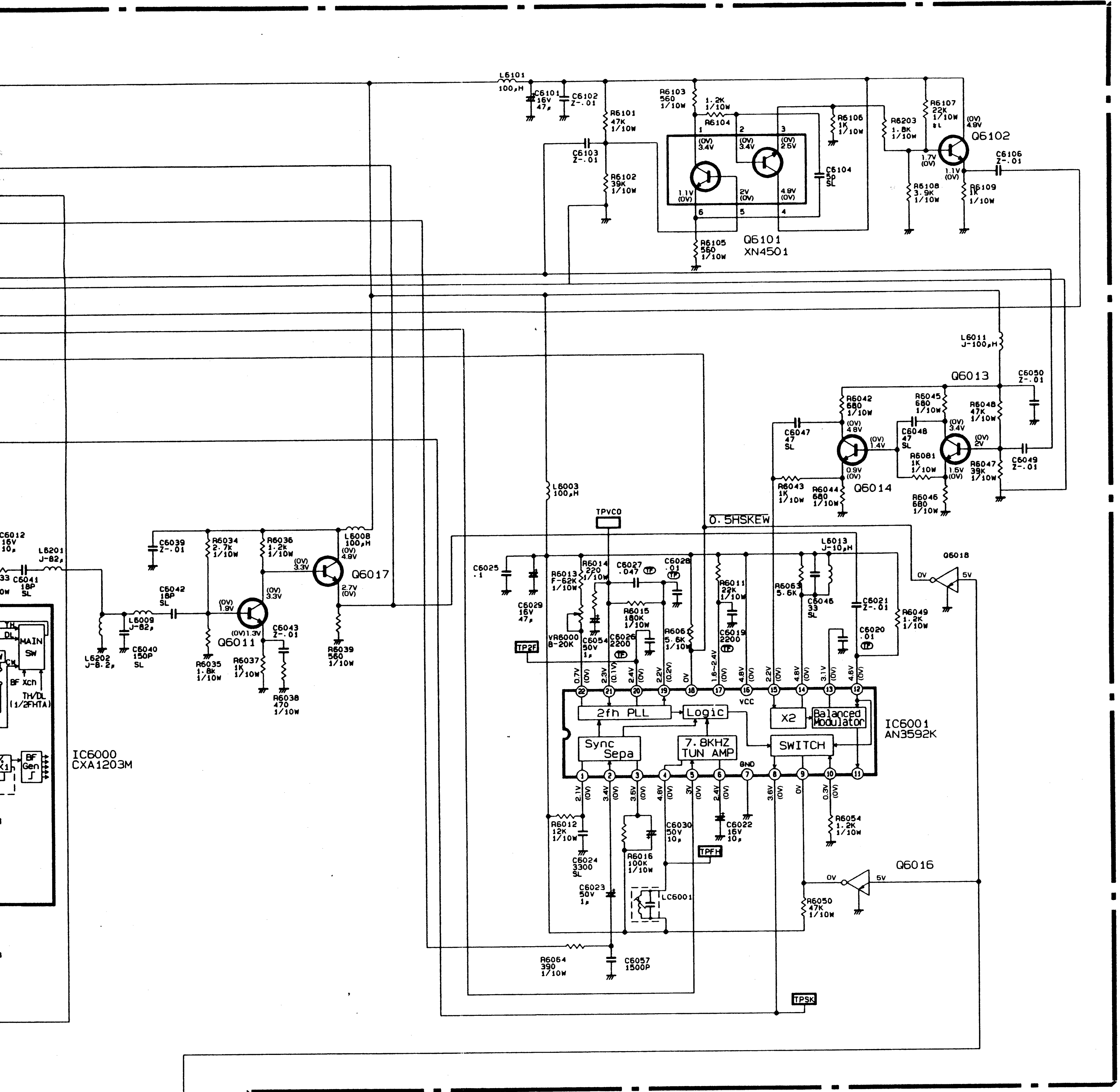
(SKEW JUMP


10
11
12
13
14
15
TPRC
TPVCO
TP2F
TPFH
TPSK
0.5HSKEW
IC6000
CXA1203M
Q6011
Q6017
Q6014
Q6101
XN4501
Q6008
Q6009
D6201
1SS252/1SS131
LC6001
L6101 100μH
L6003 100μH
L6002 100μH
L6008 100μH
L6201 J-82μ
L6202 J-8.2μ
L6009 J-82μ
L6013 J-10μH
VR6000 8-20K
MODE PB XPB
LIM
LIM1
LIM2
AMP
CONV
BELL
VCO
S/H
LPF
LPF1
LPF2
LPF3
MAIN SW
SW
X2
MASK75-1
MASK75-2
EDGE TRIG
BF Gen
AFC ID
Peak Hold
Clamp
Secam P.D.
Jump P.D.
FM DEMOD
SECAM
Sync Sepa
2fh PLL
Logic
7.8KHZ TUN AMP
SWITCH
Balanced Modulator
EE
C-H

UNLESS OTHERWISE SPECIFIED.
ALL PNP TRANSISTORS ARE 2SA1037K-R.S.
ALL NPN TRANSISTORS ARE 2SC2412K-R.S.
ALL ▷ ARE DTC124EK.

12 13 14 15 16

(SKEW JUMP) ⚠ PCB-Y/C



L6101 100μH
C6101 16V 47μ
C6102 Z-.01
R6101 47K 1/10W
C6103 Z-.01
R6102 39K 1/10W
R6103 560 1/10W
R6104 1.2K 1/10W
R6105 560 1/10W
R6106 1K 1/10W
C6104 5P SL
Q6101 XN4501
R6203 1.8K 1/10W
R6107 22K 1/10W
R6108 3.9K 1/10W
R6109 1K 1/10W
Q6102
C6106 Z-.01
L6011 J-100μH
Q6013
C6050 Z-.01
R6042 680 1/10W
C6047 47 SL
R6045 680 1/10W
C6048 47 SL
R6048 47K 1/10W
R6081 1K 1/10W
R6047 39K 1/10W
C6049 Z-.01
R6043 1K 1/10W
R6044 680 1/10W
Q6014
R6046 680 1/10W
0.5HSKEW
TPVCO
L6003 100μH
L6013 J-10μH
Q6018
C6025 .1
R6013 F-82K 1/10W
R6014 220 1/10W
C6027 .047
C6028 .01
C6029 16V 47μ
R6015 180K 1/10W
VR6000 B-20K
C6054 50V 1μ
C6026 2200
R6006 5.6K 1/10W
R6011 22K 1/10W
C6019 2200
R6063 5.6K
C6046 33 SL
C6021 Z-.01
C6020 .01
R6049 1.2K 1/10W
TP2F
2fh PLL
Logic
X2
Balanced Modulator
Sync Sepa
7.8KHZ TUN AMP
SWITCH
VCC
GND
IC6001 AN3592K
R6012 12K 1/10W
C6024 3300 SL
C6023 50V 1μ
R6016 100K 1/10W
C6030 50V 10μ
C6022 16V 10μ
TPFH
LC6001
R6054 1.2K 1/10W
Q6016
R6050 47K 1/10W
R6064 390 1/10W
C6057 1500P
TPSK
C6012 16V 10μ
L6201 J-82μ
C6041 18P SL
C6039 Z-.01
R6034 2.7K 1/10W
R6036 1.2K 1/10W
L6008 100μH
Q6017
C6042 18P SL
L6009 J-82μ
C6040 150P SL
L6202 J-8.2μ
Q6011
R6035 1.8K 1/10W
R6037 1K 1/10W
C6043 Z-.01
R6038 470 1/10W
R6039 560 1/10W
MAIN SW
BF Xch
TH/DL (1/2FHTA)
BF Gen
IC6000 CXA1203M

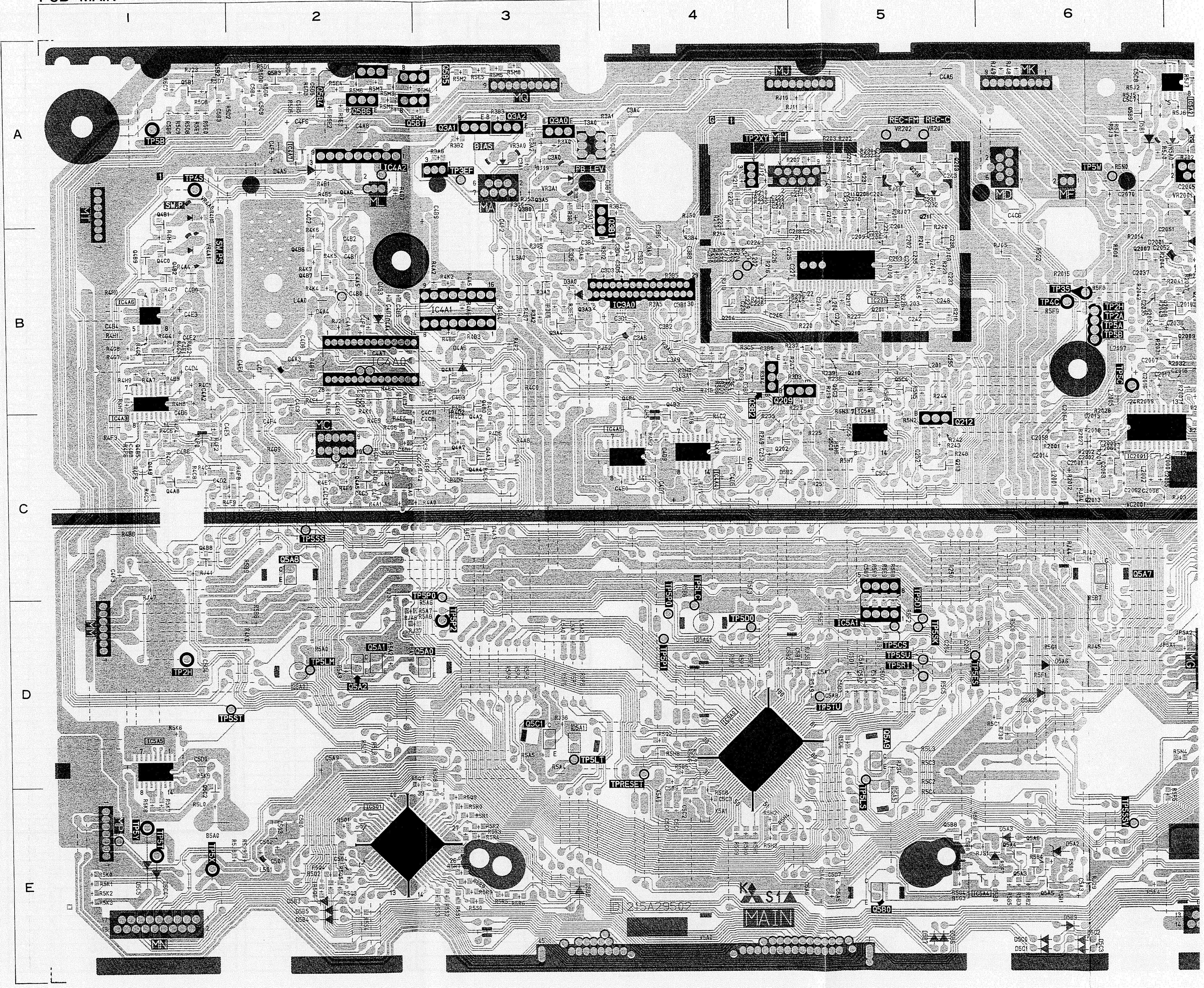
UNLESS OTHERWISE SPECIFIED.

ALL PNP TRANSISTORS ARE 2SA1037K-R, S.

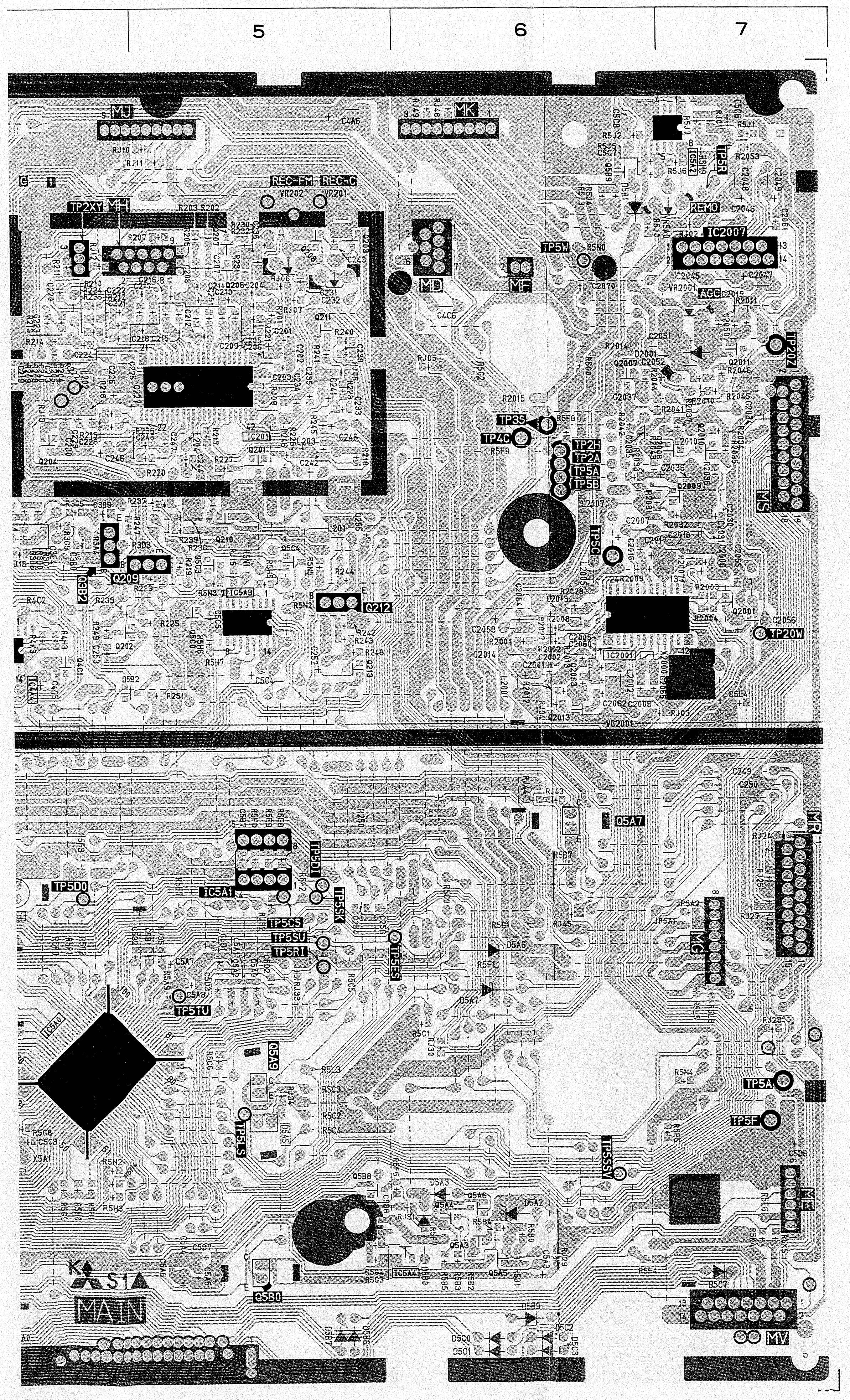
ALL NPN TRANSISTORS ARE 2SC2412K-R, S.

ALL ▷ ARE DTC124EK.

PCB-MAIN



1
2
3
4
5
6
A
B
C
D
E
MAIN
S1



PCB-MAIN

SYMBOL NO.	ADDRESS
B5A0	E-2
C2001	C-6
C2002	C-6
C2005	C-6
C2006	B-7
C2007	B-6
C2008	C-6
C201	B-5
C2013	C-6
C2014	C-6
C2016	B-6
C2017	B-6
C2018	B-7
C2019	B-7
C202	B-5
C203	B-5
C2030	B-7
C2031	B-7
C2034	B-7
C2035	B-6
C2036	B-7
C2037	B-7
C204	A-5
C2045	A-7
C2046	A-7
C2047	A-7
C2048	A-7
C2049	A-7
C205	A-5
C2050	B-7
C2051	B-7
C2052	B-7
C2055	C-6
C2056	C-7
C2058	C-6
C206	A-5
C2060	C-6
C2061	A-7
C2062	C-6
C2063	C-6
C2064	C-6
C2065	B-7
C207	A-5
C2070	A-6
C208	A-5
C209	B-5
C210	A-5
C211	A-5
C212	B-5
C213	A-5
C215	B-5
C216	A-5
C217	A-5
C218	B-5
C219	A-5
C220	A-4
C221	B-4
C222	A-4
C223	A-4
C224	B-4
C225	B-4
C226	B-4
C227	B-4
C228	B-4
C229	B-4
C230	B-4
C231	A-5
C232	A-5
C233	B-5
C234	B-5
C235	B-5
C236	A-5
C238	B-5
C240	A-5
C241	B-5
C242	B-5
C243	A-5
C244	B-5
C245	B-5
C246	B-4
C247	B-5
C248	B-5
C249	C-7
C250	C-7
C251	A-5
C252	C-5
C253	C-4
C254	D-5
C255	B-5
C256	D-5
C3A0	A-3
C3A1	A-3
C3A2	A-3
C3A3	A-4
C3A4	A-4
C3A5	B-4
C3A6	B-4
C3A7	A-3
C3A8	B-3
C3A9	B-4
C3B0	B-4
C3B1	B-4
C3B2	B-4
C3B3	B-4
C3B4	B-3
C3B5	B-4
C3B6	B-4
C3B7	A-3
C3B8	B-4
C3B9	B-4
C3D1	B-4
C3D3	B-4
C3D4	B-4
C3D5	B-4
C3D6	B-3
C3E4	B-4
C3E6	B-3
C4A0	C-2
C4A1	C-2
C4A2	B-1
C4A3	B-2
C4A4	B-2
C4A5	B-2
C4A6	A-5
C4A7	B-2
C4A8	A-2
C4A9	B-2
C4B0	B-2
C4B1	B-2
C4B2	B-2
C4B3	B-2
C4B4	B-1
C4B5	B-2
C4B6	C-1
C4B7	B-2
C4B8	C-1
C4B9	A-3
C4C0	C-3
C4C1	B-2
C4C2	A-2
C4C3	C-2
C4C4	C-2
C4C5	C-2
C4C6	A-6
C4C7	C-2
C4C8	C-2
C4C9	B-2
C4D0	B-1
C4D1	C-2
C4D2	C-1
C4D3	B-3
C4D4	B-1
C4D5	C-4
C4D6	C-1
C4D7	C-4
C4D8	B-2
C4D9	C-4
C4E0	C-4
C4E1	B-1
C4E2	B-1
C4E3	B-1
C4E4	B-2
C4E5	C-2
C4E7	C-2
C4E9	B-2
C4F0	B-2
C4F1	C-2
C4F2	B-3
C4F3	C-1
C4F4	C-2
C4F5	A-2
C4F6	A-2
C501	E-2
C502	E-2
C503	E-2
C504	E-2
C5A0	D-5
C5A1	D-5
C5A2	D-5
C5A3	E-6
C5A4	E-5
C5A5	E-5
C5A6	E-5
C5A7	D-5
C5A8	D-5
C5A9	D-2
C5B0	E-2
C5B1	D-5
C5B2	D-4
C5B3	A-1
C5B4	A-2
C5B5	A-2
C5B6	A-1
C5B7	D-5
C5B8	E-5
C5B9	E-4
C5C0	E-4
C5C1	E-4
C5C2	E-4
C5C3	E-4
C5C4	C-5
C5C5	C-5
C5C6	A-7
C5C7	A-6
C5C8	A-6
C5C9	A-2
C5D0	D-1
C5D1	D-5
C5D2	D-5
C5D3	D-5
C5D4	D-1
C5D5	A-2
C5D6	E-7
C5D7	E-5
D2001	B-7
D3A0	B-3
D4A1	C-3
D4A3	C-3
D4A4	B-2
D4A5	A-2
D4A6	B-3
D5A0	D-2
D5A1	D-3
D5A2	E-6
D5A3	E-6
D5A4	D-4
D5A5	E-5
D5A6	D-6
D5A7	D-6
D5B0	E-6
D5B1	A-6
D5B2	C-4
D5B3	E-2
D5B4	E-2
D5B5	E-2
D5B6	E-5
D5B7	E-5
D5B8	E-3
D5B9	E-6
D5C0	E-6
D5C1	E-6
D5C2	E-6
D5C3	E-6
D5C4	E-1
D5C5	E-1
D5C7	E-7
G	A-4
IC2001	C-6
IC2007	A-7
IC201	B-5
IC3A0	B-3
IC4A0	B-2
IC4A1	B-3
IC4A2	A-2
IC4A3	B-1
IC4A4	C-4
IC4A5	C-4
IC4A6	B-1
IC4A7	A-2
IC501	E-2
IC5A0	D-4
IC5A1	D-5
IC5A2	A-7
IC5A3	C-5
IC5A4	E-5
IC5A5	D-1
JP5A1	D-7
JP5A2	D-7
L2001	C-6
L2002	C-6
L2005	C-6
L2007	B-6
L201	B-5
L2010	B-7
L202	B-4
L203	B-5
L204	B-5
L3A0	B-3
L3A1	B-4
L4A0	B-2
L501	E-2
L5A0	D-3
L5A1	D-3
L5A2	D-3
MA	A-3
MC	C-2
MD	A-6
ME	E-7
MF	A-6
MG	D-7
MH	A-4
MJ	A-5
MK	A-6
ML	A-2
MM	D-1
MN	E-1
MP	E-1
MQ	A-3
MR	C-7
MS	B-7
MT	A-1
MV	E-7
Q2001	C-7
Q2007	B-6
Q2008	B-7
Q2009	B-7
Q201	B-5
Q2010	B-7
Q2011	B-7
Q2013	C-6
Q202	C-4
Q203	A-5
Q204	B-4
Q206	A-5
Q207	A-5
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Q3A2	A-3
Q3A3	B-3
Q3A4	B-3
Q3A5	A-3
Q3B0	A-3
Q3B1	A-3
Q3B2	B-4
Q4A1	B-3
Q4A2	C-3
Q4A3	C-3
Q4A4	C-3
Q4A5	C-2
Q4A6	A-2
Q4A7	C-3
Q4A8	C-1
Q4A9	C-1
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Q5C0	C-5
Q5C1	D-3
Q5C2	E-1
Q5C3	B-5
Q5C4	B-5
R2001	C-6
R2002	C-6
R2003	C-7
R2004	C-7
R2007	B-7
R2008	C-6
R2009	B-6
R201	A-5
R2010	B-7
R2011	A-7
R2012	C-6
R2013	C-6
R2014	B-7
R2015	B-6
R202	A-5
R2027	C-6
R2028	C-6
R203	A-5
R2031	B-6
R2032	B-7
R2033	B-6
R2034	B-7
R2035	B-7
R2036	B-7
R2037	B-7
R204	A-5
R2041	B-6
R2042	B-6
R2043	B-6
R2044	B-6
R2045	B-7
R2046	B-7
R205	A-5
R2053	A-7
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R211	A-4
R212	A-4
R213	A-4
R214	B-4
R215	B-4
R216	B-4
R217	B-5
R218	B-5
R219	B-5
R220	B-5
R221	B-5
R222	A-5
R223	B-5
R225	C-5
R227	B-5
R228	B-5
R229	B-5
R230	A-5
R231	A-5
R232	A-5
R233	C-4
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R237	B-5
R238	B-5
R239	B-5
R240	B-5
R241	B-5
R242	C-5
R243	C-5
R244	B-5
R245	B-5
R246	B-5
R247	B-4
R248	C-5
R249	C-4
R250	D-5
R251	C-5
R3A0	A-3
R3A1	A-4
R3A2	B-3
R3A3	B-3
R3A4	B-4
R3A5	B-4
R3A6	B-4
R3A7	B-4
R3A8	A-3
R3A9	B-4
R3B0	A-3
R3B1	A-4
R3B2	A-3
R3B3	A-3
R3B4	B-4
R3B5	B-4
R3B6	B-4
R3B7	A-3
R3C4	B-3
R3C5	B-4
R3D0	B-4
R3D1	B-4
R3D2	B-3
R3D3	B-5
R3E5	B-3
R3E6	B-3
R3G0	B-3
R3G5	B-3
R3G9	B-4
R3H0	B-4
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R4A1	C-2
R4A2	B-3
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R4A5	B-3
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R4B1	A-2
R4B2	A-2
R4B3	B-3
R4B4	B-3
R4B5	A-2
R4B6	B-3
R4B7	B-3
R4B8	C-1
R4B9	B-1
R4C0	B-3
R4C1	B-1
R4C2	C-4
R4C3	C-1
R4C4	C-1
R4C5	C-3
R4C6	C-1
R4C7	C-3
R4C8	C-1
R4C9	C-1
R4D0	C-3
R4D1	C-3
R4D2	C-3
R4D3	C-3
R4D4	C-3
R4D5	C-3
R4D6	C-2
R4D7	B-2
R4D8	B-2
R4D9	C-2
R4E0	C-2
R4E1	B-2
R4E2	B-3

SYMBOL NO.	ADDRESS
C4B6	C-1
C4B7	B-2
C4B8	C-1
C4B9	A-3
C4C0	C-3
C4C1	B-2
C4C2	A-2
C4C3	C-2
C4C4	C-2
C4C5	C-2
C4C6	A-6
C4C7	C-2
C4C8	C-2
C4C9	B-2
C4D0	B-1
C4D1	C-2
C4D2	C-1
C4D3	B-3
C4D4	B-1
C4D5	C-4
C4D6	C-1
C4D7	C-4
C4D8	B-2
C4D9	C-4
C4E0	C-4
C4E1	B-1
C4E2	B-1
C4E3	B-1
C4E4	B-2
C4E5	C-2
C4E7	C-2
C4E9	B-2
C4F0	B-2
C4F1	C-2
C4F2	B-3
C4F3	C-1
C4F4	C-2
C4F5	A-2
C4F6	A-2
C501	E-2
C502	E-2
C503	E-2
C504	E-2
C5A0	D-5
C5A1	D-5
C5A2	D-5
C5A3	E-6
C5A4	E-5
C5A5	E-5
C5A6	E-5
C5A7	D-5
C5A8	D-5
C5A9	D-2
C5B0	E-2
C5B1	D-5
C5B2	D-4
C5B3	A-1
C5B4	A-2
C5B5	A-2
C5B6	A-1
C5B7	D-5
C5B8	E-5
C5B9	E-4
C5C0	E-4
C5C1	E-4
C5C2	E-4
C5C3	E-4

SYMBOL NO.	ADDRESS
C5C4	C-5
C5C5	C-5
C5C6	A-7
C5C7	A-6
C5C8	A-6
C5C9	A-2
C5D0	D-1
C5D1	D-5
C5D2	D-5
C5D3	D-5
C5D4	D-1
C5D5	A-2
C5D6	E-7
C5D7	E-5
D2001	B-7
D3A0	B-3
D4A1	C-3
D4A3	C-3
D4A4	B-2
D4A5	A-2
D4A6	B-3
D5A0	D-2
D5A1	D-3
D5A2	E-6
D5A3	E-6
D5A4	D-4
D5A5	E-5
D5A6	D-6
D5A7	D-6
D5B0	E-6
D5B1	A-6
D5B2	C-4
D5B3	E-2
D5B4	E-2
D5B5	E-2
D5B6	E-5
D5B7	E-5
D5B8	E-3
D5B9	E-6
D5C0	E-6
D5C1	E-6
D5C2	E-6
D5C3	E-6
D5C4	E-1
D5C5	E-1
D5C7	E-7
G	A-4
IC2001	C-6
IC2007	A-7
IC201	B-5
IC3A0	B-3
IC4A0	B-2
IC4A1	B-3
IC4A2	A-2
IC4A3	B-1
IC4A4	C-4
IC4A5	C-4
IC4A6	B-1
IC4A7	A-2
IC501	E-2
IC5A0	D-4
IC5A1	D-5
IC5A2	A-7
IC5A3	C-5

SYMBOL NO.	ADDRESS
IC5A4	E-5
IC5A5	D-1
JP5A1	D-7
JP5A2	D-7
L2001	C-6
L2002	C-6
L2005	C-6
L2007	B-6
L201	B-5
L2010	B-7
L202	B-4
L203	B-5
L204	B-5
L3A0	B-3
L3A1	B-4
L4A0	B-2
L501	E-2
L5A0	D-3
L5A1	D-3
L5A2	D-3
MA	A-3
MC	C-2
MD	A-6
ME	E-7
MF	A-6
MG	D-7
MH	A-4
MJ	A-5
MK	A-6
ML	A-2
MM	D-1
MN	E-1
MP	E-1
MQ	A-3
MR	C-7
MS	B-7
MT	A-1
MV	E-7
Q2001	C-7
Q2007	B-6
Q2008	B-7
Q2009	B-7
Q201	B-5
Q2010	B-7
Q2011	B-7
Q2013	C-6
Q202	C-4
Q203	A-5
Q204	B-4
Q206	A-5
Q207	A-5
Q208	A-5
Q209	B-5
Q210	B-5
Q211	B-5
Q212	C-5
Q213	C-5
Q3A0	A-3
Q3A1	A-3
Q3A2	A-3
Q3A3	B-3
Q3A4	B-3
Q3A5	A-3

SYMBOL NO.	ADDRESS
Q3B0	A-3
Q3B1	A-3
Q3B2	B-4
Q4A1	B-3
Q4A2	C-3
Q4A3	C-3
Q4A4	C-3
Q4A5	C-2
Q4A6	A-2
Q4A7	C-3
Q4A8	C-1
Q4A9	C-1
Q4B0	B-3
Q4B1	A-1
Q4B2	B-1
Q4B3	C-4
Q4B4	C-4
Q4B5	C-1
Q4B6	B-2
Q4B7	B-2
Q4B8	C-1
Q4B9	B-1
Q4C0	B-1
Q4C1	C-4
Q5A0	D-3
Q5A1	D-2
Q5A2	D-2
Q5A3	E-6
Q5A4	E-6
Q5A5	E-6
Q5A6	E-6
Q5A7	C-6
Q5A8	C-2
Q5A9	D-5
Q5B0	E-5
Q5B1	A-1
Q5B2	A-2
Q5B3	A-2
Q5B4	A-2
Q5B5	A-3
Q5B6	A-2
Q5B7	A-3
Q5B8	E-5
Q5B9	A-6
Q5C0	C-5
Q5C1	D-3
Q5C2	E-1
Q5C3	B-5
Q5C4	B-5
R2001	C-6
R2002	C-6
R2003	C-7
R2004	C-7
R2007	B-7
R2008	C-6
R2009	B-6
R201	A-5
R2010	B-7
R2011	A-7
R2012	C-6
R2013	C-6
R2014	B-7
R2015	B-6
R202	A-5
R2027	C-6
R2028	C-6

SYMBOL NO.	ADDRESS
R203	A-5
R2031	B-6
R2032	B-7
R2033	B-6
R2034	B-7
R2035	B-7
R2036	B-7
R2037	B-7
R204	A-5
R2041	B-6
R2042	B-6
R2043	B-6
R2044	B-6
R2045	B-7
R2046	B-7
R205	A-5
R2053	A-7
R206	A-5
R207	A-5
R208	A-5
R209	A-5
R210	A-4
R211	A-4
R212	A-4
R213	A-4
R214	B-4
R215	B-4
R216	B-4
R217	B-5
R218	B-5
R219	B-5
R220	B-5
R221	B-5
R222	A-5
R223	B-5
R225	C-5
R227	B-5
R228	B-5
R229	B-5
R230	A-5
R231	A-5
R232	A-5
R233	C-4
R234	A-4
R235	B-4
R236	B-5
R237	B-5
R238	B-5
R239	B-5
R240	B-5
R241	B-5
R242	C-5
R243	C-5
R244	B-5
R245	B-5
R246	B-5
R247	B-4
R248	C-5
R249	C-4
R250	D-5
R251	C-5
R3A0	A-3
R3A1	A-4
R3A2	B-3
R3A3	B-3
R3A4	B-4
R3A5	B-4

SYMBOL NO.	ADDRESS
R3A6	B-4
R3A7	B-4
R3A8	A-3
R3A9	B-4
R3B0	A-3
R3B1	A-4
R3B2	A-3
R3B3	A-3
R3B4	B-4
R3B5	B-4
R3B6	B-4
R3B7	A-3
R3C4	B-3
R3C5	B-4
R3D0	B-4
R3D1	B-4
R3D2	B-3
R3D3	B-5
R3E5	B-3
R3E6	B-3
R3G0	B-3
R3G5	B-3
R3G9	B-4
R3H0	B-4
R4A0	C-2
R4A1	C-2
R4A2	B-3
R4A3	C-2
R4A4	B-1
R4A5	B-3
R4A6	B-3
R4A7	B-1
R4A8	C-3
R4A9	B-3
R4B0	B-2
R4B1	A-2
R4B2	A-2
R4B3	B-3
R4B4	B-3
R4B5	A-2
R4B6	B-3
R4B7	B-3
R4B8	C-1
R4B9	B-1
R4C0	B-3
R4C1	B-1
R4C2	C-4
R4C3	C-1
R4C4	C-1
R4C5	C-3
R4C6	C-1
R4C7	C-3
R4C8	C-1
R4C9	C-1
R4D0	C-3
R4D1	C-3
R4D2	C-3
R4D3	C-3
R4D4	C-3
R4D5	C-3
R4D6	C-2
R4D7	B-2
R4D8	B-2
R4D9	C-2
R4E0	C-2
R4E1	B-2
R4E2	B-3

SYMBOL NO.	ADDRESS
R4E3	B-2
R4E4	B-2
R4E5	C-2
R4E6	B-2
R4E7	C-2
R4E8	C-3
R4E9	C-2
R4F0	C-1
R4F1	C-3
R4F2	C-1
R4F3	C-1
R4F4	C-1
R4F5	C-1
R4F6	C-1
R4F7	B-1
R4F8	C-2
R4F9	C-1
R4G1	C-2
R4G2	B-1
R4G3	B-1
R4G4	B-1
R4G5	B-1
R4G6	C-2
R4G7	B-1
R4G8	B-1
R4G9	C-2
R4H0	B-1
R4H1	B-1
R4H2	C-4
R4H3	C-4
R4H4	B-1
R4H5	C-4
R4H6	A-1
R4H7	B-1
R4H8	B-1
R4H9	B-1
R4K0	D-2
R4K1	C-2
R4K2	B-3
R4K3	C-4
R4K4	B-2
R4K5	B-2
R4K6	B-2
R4K7	B-2
R501	E-2
R502	E-2
R5A0	D-2
R5A1	D-2
R5A2	D-2
R5A3	D-2
R5A4	D-3
R5A5	D-3
R5A6	D-3
R5A7	D-3
R5A8	D-3
R5A9	D-5
R5B0	E-6
R5B1	E-6
R5B2	E-6
R5B3	E-6
R5B4	E-6
R5B5	E-6
R5B6	D-4
R5B7	D-6
R5B8	D-2
R5B9	D-2
R5C0	D-6

SYMBOL NO.	ADDRESS
R5C1	D-6
R5C2	E-5
R5C3	D-5
R5C4	E-5
R5C5	D-5
R5C6	D-5
R5C7	A-1
R5C8	A-1
R5C9	A-1
R5D0	A-2
R5D1	A-2
R5D2	A-2
R5D3	A-2
R5D4	A-2
R5D5	A-2
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R5E8	D-5
R5E9	D-5
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R5F1	D-6
R5F2	D-5
R5F3	D-4
R5F4	E-6
R5F5	E-7
R5F6	E-5
R5F7	E-6
R5F8	B-6
R5F9	B-6
R5G0	B-6
R5G1	D-6
R5G2	B-6
R5G3	E-5
R5G4	E-5
R5G5	D-4
R5G6	E-4
R5G7	E-4
R5G8	E-4
R5G9	E-4
R5H0	E-4
R5H1	E-4
R5H2	E-4
R5H3	E-4
R5H4	E-4
R5H5	B-5
R5H6	C-5
R5H7	C-5
R5H8	D-4
R5J0	A-6
R5J1	A-7
R5J2	A-6
R5J3	A-6
R5J4	A-6
R5J5	A-6
R5J6	A-7
R5J7	A-7
R5J8	E-1
R5J9	E-2

SYMBOL NO.	ADDRESS
R5K0	E-1
R5K1	E-1
R5K2	E-1
R5K3	E-1
R5K4	E-7
R5K5	E-7
R5K6	D-1
R5K7	E-1
R5K8	E-1
R5K9	D-1
R5L0	E-1
R5L3	D-5
R5L4	C-7
R5L5	D-7
R5L6	D-7
R5L7	D-2
R5L8	D-2
R5M0	A-2
R5M1	A-3
R5M2	A-3
R5M3	A-2
R5M4	A-2
R5M5	A-3
R5M6	A-2
R5M7	A-2
R5M8	A-3
R5M9	A-7
R5N0	A-6
R5N1	B-5
R5N2	C-5
R5N3	B-5
R5N4	D-7
R5N5	B-5
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R5P1	D-4
R5P2	D-4
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R5P4	D-3
R5P5	D-3
R5P6	D-3
R5P7	D-3
R5P8	D-3
R5Q2	D-4
R5Q3	E-2
R5Q4	E-2
R5Q5	E-2
R5Q6	E-2
R5Q7	E-2
R5Q8	E-3
R5Q9	E-3
R5R0	E-3
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R5R6	E-3
R5R7	E-3
R5R8	E-3
R5R9	E-3
R5S0	E-3
R5S1	E-3
R5S2	E-3
R5S3	E-3
R5S4	E-2
RJ01	A-7

SYMBOL NO.	ADDRESS
RJ02	A-7
RJ03	C-6
RJ04	C-6
RJ05	B-6
RJ06	A-5
RJ07	A-5
RJ08	B-5
RJ09	B-5
RJ10	A-5
RJ11	A-5
RJ12	A-4
RJ13	B-4
RJ15	B-5
RJ16	B-4
RJ17	C-4
RJ18	C-4
RJ19	A-3
RJ21	B-2
RJ22	C-2
RJ23	A-1
RJ24	C-7
RJ25	D-7
RJ26	D-7
RJ27	D-7
RJ28	D-7
RJ29	E-6
RJ30	D-6
RJ31	E-6
RJ32	D-5
RJ33	D-5
RJ34	D-5
RJ35	D-5
RJ36	D-3
RJ37	D-2
RJ38	C-2
RJ41	C-1
RJ42	C-3
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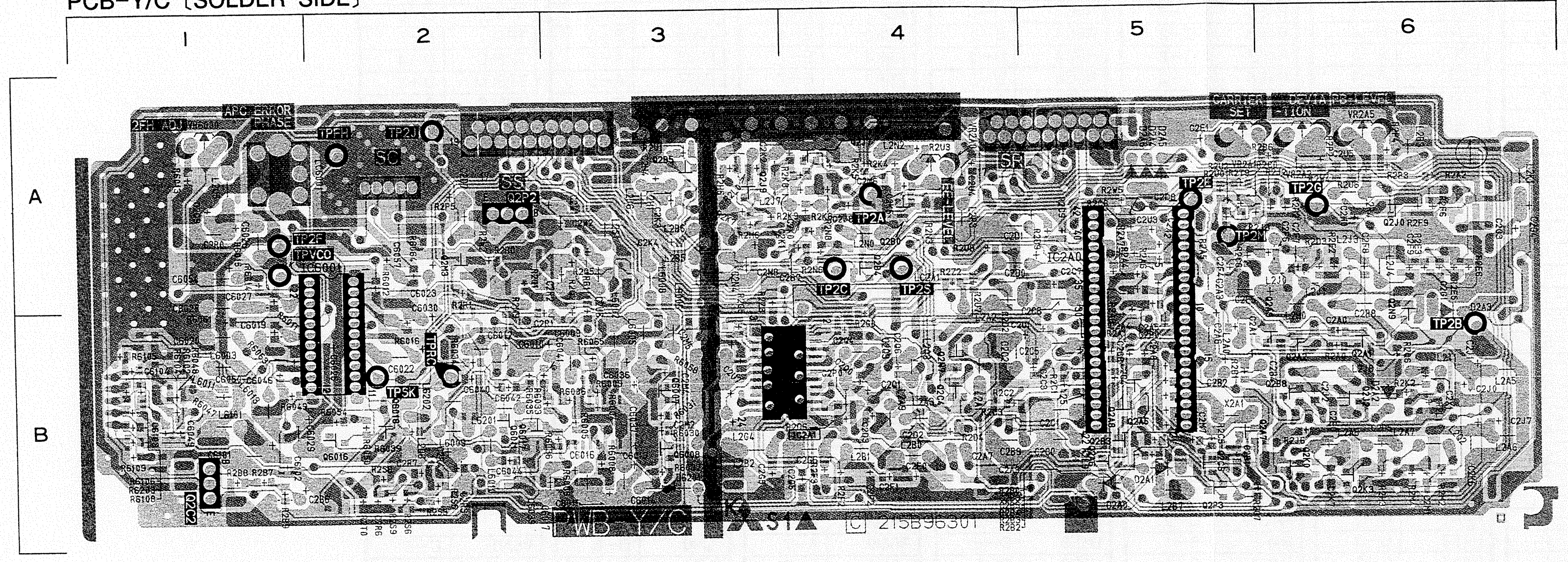
RJ51	B-4
RJ52	B-3
RJ53	A-3
T3A0	A-3
TP20W	C-7
TP20Z	B-7
TP2A	B-6
TP2H	B-6
TP2H	D-1
TP2XY	A-4
TP3EF	A-3
TP3S	B-6
TP4C	B-6
TP4S	A-1
TP5A	D-7
TP5A	B-6
TP5B	B-6
TP5B	A-1
TP5C	B-6
TP5CS	D-5

SYMBOL NO.	ADDRESS
TP5D0	D-4
TP5DI	D-5
TP5ES	D-5
TP5F	E-7
TP5LC	D-4
TP5LM	D-2
TP5LS	D-5
TP5LT	D-3
TP5P0	D-4
TP5P0	D-3
TP5P1	D-4
TP5P2	D-3
TP5R	A-7
TP5RI	D-5
TP5SK	D-5
TP5SS	C-2
TP5SSV	E-6
TP5ST	D-1
TP5SU	D-5
TP5T	E-1
TP5TU	D-5
TP5W	A-6
TP5X	E-1
TP5Y	E-1
TPRESET	D-4
V5A0	E-5
VC2001	C-6
VR2001	A-7
VR201	A-5
VR202	A-5
VR3A0	A-3
VR3A1	A-3
VR4A0	A-1
VR4A1	B-1
VR5A0	A-7
X2000	C-6
X5A0	E-4
X5A1	E-4

PCB-Y/C 〔SOLDER SIDE〕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DEVIA TION
PB-LEVEL
SC
SS
SR
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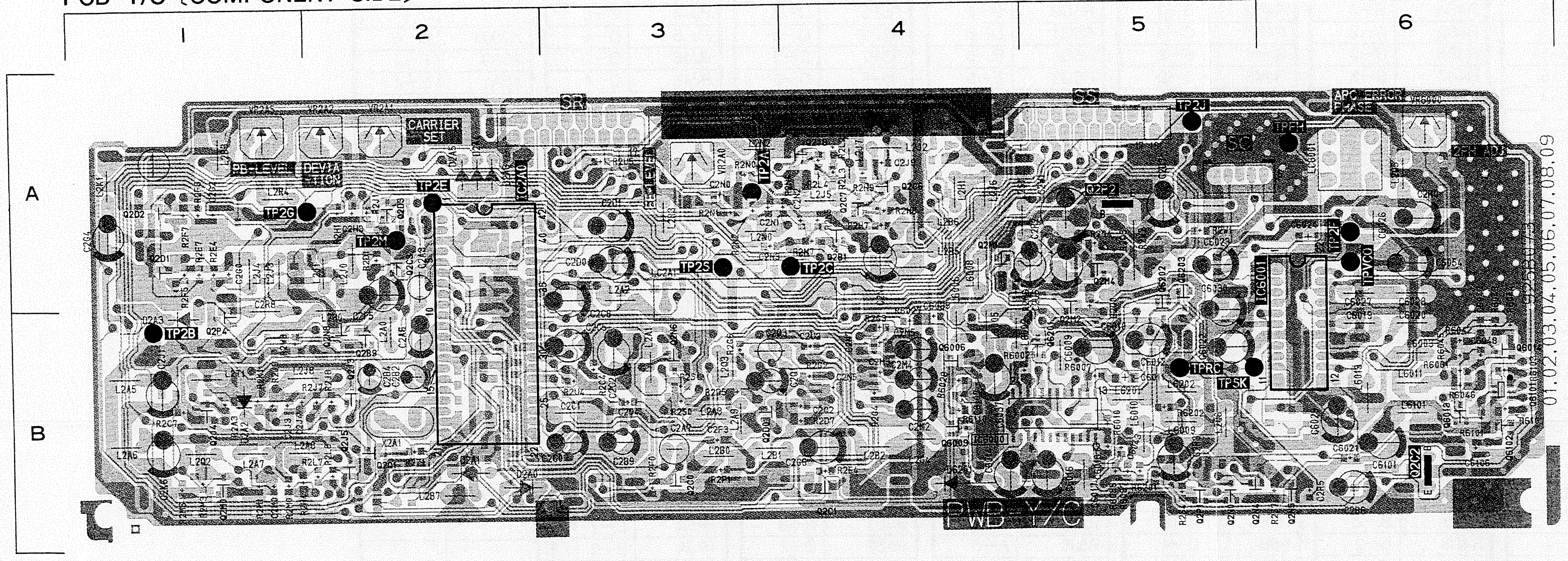
TPVCO
TP2H
TP2J
TP2A
TP2C
TP2S
TP2E
TP2M
TP2G
TP2B
TPRC
TP5K
PWB-Y/C

PCB-Y/C 〔SOLDER SIDE〕

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	AD
C2A0	B−6	C2D2	B−4	C2K2	A−4	C2U1	B−5	C6040	B
C2A1	B−5	C2D3	B−4	C2K3	A−3	C2U3	A−5	C6041	B
C2A2	A−5	C2D5	B−6	C2K4	A−3	C2U4	A−4	C6042	B
C2A3	A−5	C2D7	A−2	C2K5	A−4	C2U5	A−6	C6044	B
C2A4	A−5	C2D8	A−5	C2K6	B−6	C2U6	A−3	C6046	B
C2A5	B−5	C2E0	B−6	C2K7	B−6	C2U7	B−3	C6049	B
C2A6	B−5	C2E1	A−5	C2M1	B−6	C2W1	A−3	C6050	B
C2A7	B−4	C2F0	B−4	C2M2	B−3	C2W2	A−3	C6054	A
C2A8	B−5	C2F1	B−4	C2M4	B−3	C2X1	B−6	C6057	A
C2A9	B−5	C2F2	B−4	C2M5	B−3	C6009	B−3	C6101	B
C2B0	B−5	C2F4	A−5	C2M6	A−4	C6010	B−3	C6102	B
C2B1	B−5	C2F5	A−6	C2M7	B−5	C6012	B−2	C6103	B
C2B2	B−5	C2F6	A−6	C2N4	A−3	C6013	B−3	C6104	B
C2B3	B−5	C2F7	A−6	C2N8	A−3	C6014	B−3		
C2B4	B−6	C2F8	A−6	C2P0	B−4	C6015	B−3	D2A0	B
C2B5	B−5	C2F9	A−6	C2Q0	B−4	C6016	B−3	D2A1	B
C2B6	B−2	C2G1	A−6	C2Q1	B−4	C6017	B−3	D2A2	B
C2B7	A−4	C2G3	A−6	C2Q3	B−4	C6019	B−1	D2A3	B
C2B9	B−5	C2G4	A−6	C2Q4	B−4	C6020	B−1	D2A4	A
C2C0	B−5	C2G5	B−4	C2Q5	B−4	C6022	B−2	D2A5	A
C2C1	B−5	C2G6	B−4	C2Q6	B−4	C6023	A−2	D2A6	A
C2C2	B−5	C2H0	A−6	C2Q9	A−1	C6025	B−2	D6201	B
C2C3	B−5	C2H4	A−3	C2R0	A−1	C6026	A−1		
C2C4	B−5	C2J0	B−6	C2R1	B−3	C6027	A−1	IC2A0	A
C2C5	B−5	C2J1	B−6	C2R2	A−3	C6028	A−1	IC2A1	B
C2C6	B−5	C2J2	B−6	C2R3	B−2	C6029	B−2	IC6001	A
C2C7	A−5	C2J7	B−6	C2R4	B−2	C6030	B−2		
C2C8	A−5	C2J8	A−4	C2R6	B−2	C6036	B−3	L2A0	B
C2D0	A−5	C2K0	A−4	C2R7	B−2	C6037	B−3	L2A1	B
C2D1	A−5	C2K1	A−4	C2R8	B−6	C6039	B−2	L2A2	A

PCB-Y/C 〔COMPONENT SIDE〕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2
3
4
5
6
A
B
CARRIER SET
PB-LEVEL
DEVIA TION
APC ERROR PHASE
SR
SS
SC
TP2G
TP2E
TP2M
TP2B
TP2S
TP2C
TP2J
TP2H
TPRC
TP5K
PWB-Y/C
01.02.03.04.05.06.07.08.09

PCB-Y/C 〔COMPONENT SIDE〕

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	AD
C2A3	A−2	C2M3	B−4	C6020	B−6	IC6000	B−5	L2J8	B
C2A6	B−2	C2M4	B−4	C6021	B−6	IC6001	A−6	L2K1	A
C2A7	B−3	C2M5	B−4	C6022	B−5			L2N0	A
C2B2	B−2	C2N0	A−3	C6023	A−5	L2A0	B−2	L2N2	A
C2B4	B−2	C2N1	A−3	C6024	A−6	L2A1	B−3	L2Q2	B
C2B6	B−6	C2N2	A−4	C6026	A−6	L2A2	A−3	L2Q3	B
C2B9	B−3	C2N3	A−3	C6027	A−6	L2A3	B−3	L2Q5	A
C2C0	B−3	C2N4	A−4	C6028	A−6	L2A5	B−1	L2Q6	B
C2C1	B−3	C2N5	B−4	C6029	B−6	L2A6	B−1	L2R3	A
C2C2	B−3	C2N7	B−4	C6030	B−5	L2A7	B−1	L2R4	A
C2C5	B−3	C2Q1	B−3	C6035	B−4	L2A8	B−1	L2S1	A
C2C8	A−3	C2Q2	B−4	C6037	B−4	L2A9	B−3	L2T1	B
C2D0	A−3	C2Q3	B−3	C6043	B−5	L2B0	B−3	L6002	B
C2D1	A−3	C2R0	A−6	C6047	B−6	L2B1	B−3	L6003	B
C2D4	B−3	C2R2	A−5	C6048	B−6	L2B2	B−4	L6005	B
C2D7	A−5	C2R3	B−5	C6054	A−6	L2B3	A−1	L6006	B
C2F3	B−3	C2R5	B−6	C6101	B−6	L2B5	A−4	L6008	A
C2F5	A−2	C2R8	B−1	C6106	B−6	L2B6	A−4	L6009	B
C2G0	A−1	C2U2	B−4	C6107	B−4	L2B7	B−2	L6010	B
C2G2	A−1	C2U6	A−5			L2G4	B−4	L6011	B
C2G4	A−1	C2W1	A−5	D2A0	B−3	L2H0	B−2	L6013	B
C2G6	B−4	C6009	B−5	D2A1	B−2	L2H1	A−4	L6101	B
C2H3	A−2	C6010	B−5	D2A2	B−1	L2J0	A−2	L6201	B
C2J1	B−1	C6011	B−5	D2A3	B−1	L2J1	A−2	L6202	B
C2J3	B−1	C6012	B−5	D2A4	A−2	L2J2	A−4		
C2J4	B−2	C6014	B−4	D2A5	A−2	L2J3	A−1	LC2A1	B
C2J9	A−4	C6016	B−5	D2A6	A−2	L2J4	A−1	LC6001	A
C2K6	B−1	C6017	B−5	D6201	B−4	L2J5	A−4		
C2M0	B−1	C6018	B−5			L2J6	A−4	Q2B1	A
C2M2	B−4	C6019	B−6	IC2A0	A−2	L2J7	A−4	Q2B9	B

HS−7300E
HS−7300E(B)

⑧

Y/C 〔SOLDER SIDE〕

L	ADDRESS
	B−6
	B−5
	A−5
	A−5
	A−5
	B−5
	B−5
	B−4
	B−5
	B−5
	B−5
	B−5
	B−5
	B−5
	B−6
	B−5
	B−2
	A−4
	B−5
	B−5
	B−5
	B−5
	B−5
	B−5
	B−5
	B−5
	A−5
	A−5
	A−5
	A−5

SYMBOL NO.	ADDRESS
C2D2	B−4
C2D3	B−4
C2D5	B−6
C2D7	A−2
C2D8	A−5
C2E0	B−6
C2E1	A−5
C2F0	B−4
C2F1	B−4
C2F2	B−4
C2F4	A−5
C2F5	A−6
C2F6	A−6
C2F7	A−6
C2F8	A−6
C2F9	A−6
C2G1	A−6
C2G3	A−6
C2G4	A−6
C2G5	B−4
C2G6	B−4
C2H0	A−6
C2H4	A−3
C2J0	B−6
C2J1	B−6
C2J2	B−6
C2J7	B−6
C2J8	A−4
C2K0	A−4
C2K1	A−4

SYMBOL NO.	ADDRESS
C2K2	A−4
C2K3	A−3
C2K4	A−3
C2K5	A−4
C2K6	B−6
C2K7	B−6
C2M1	B−6
C2M2	B−3
C2M4	B−3
C2M5	B−3
C2M6	A−4
C2M7	B−5
C2N4	A−3
C2N8	A−3
C2P0	B−4
C2Q0	B−4
C2Q1	B−4
C2Q3	B−4
C2Q4	B−4
C2Q5	B−4
C2Q6	B−4
C2Q9	A−1
C2R0	A−1
C2R1	B−3
C2R2	A−3
C2R3	B−2
C2R4	B−2
C2R6	B−2
C2R7	B−2
C2R8	B−6

SYMBOL NO.	ADDRESS
C2U1	B−5
C2U3	A−5
C2U4	A−4
C2U5	A−6
C2U6	A−3
C2U7	B−3
C2W1	A−3
C2W2	A−3
C2X1	B−6
C6009	B−3
C6010	B−3
C6012	B−2
C6013	B−3
C6014	B−3
C6015	B−3
C6016	B−3
C6017	B−3
C6019	B−1
C6020	B−1
C6022	B−2
C6023	A−2
C6025	B−2
C6026	A−1
C6027	A−1
C6028	A−1
C6029	B−2
C6030	B−2
C6036	B−3
C6037	B−3
C6039	B−2

SYMBOL NO.	ADDRESS
C6040	B−2
C6041	B−3
C6042	B−2
C6044	B−2
C6046	B−1
C6049	B−1
C6050	B−1
C6054	A−1
C6057	A−2
C6101	B−1
C6102	B−1
C6103	B−1
C6104	B−1
D2A0	B−5
D2A1	B−5
D2A2	B−6
D2A3	B−6
D2A4	A−5
D2A5	A−5
D2A6	A−5
D6201	B−3
IC2A0	A−5
IC2A1	B−4
IC6001	A−2
L2A0	B−5
L2A1	B−4
L2A2	A−5

SYMBOL NO.	ADDRESS
L2A3	B−4
L2A5	B−6
L2A6	B−6
L2A7	B−6
L2A8	B−6
L2A9	B−4
L2B0	B−4
L2B1	B−4
L2B2	B−4
L2B3	A−6
L2B5	A−3
L2B6	A−3
L2B7	B−5
L2G4	B−3
L2H0	B−6
L2H1	A−3
L2J0	A−6
L2J1	A−6
L2J2	A−3
L2J3	A−6
L2J4	A−6
L2J5	A−4
L2J6	A−3
L2J7	A−4
L2J8	B−6
L2K1	A−6
L2N0	A−4
L2N2	A−4
L2Q2	B−6
L2Q3	B−4

SYMBOL NO.	ADDRESS
L2Q5	A−1
L2Q6	B−2
L2R3	A−4
L2R4	A−6
L2S1	A−3
L2T1	B−6
L6002	B−3
L6003	B−1
L6005	B−3
L6006	B−3
L6008	A−3
L6009	B−2
L6010	B−2
L6011	B−1
L6013	B−1
L6101	B−1
L6201	B−2
L6202	B−2
LC2A1	B−4
LC6001	A−1
Q2A1	B−6
Q2A2	B−6
Q2A3	B−6
Q2A5	B−5
Q2A6	B−5
Q2A7	B−6
Q2A8	B−5
Q2B0	A−4

SYMBOL NO.	ADDRESS
Q2B3	B−5
Q2B4	A−4
Q2B5	A−3
Q2B8	B−6
Q2C2	B−1
Q2C4	B−4
Q2C5	B−5
Q2J0	A−6
Q2J2	B−6
Q2J7	A−4
Q2J9	A−3
Q2K0	B−6
Q2K3	B−6
Q2M3	A−2
Q2N7	B−4
Q2N9	B−6
Q2P2	A−2
Q2P3	B−5
Q6007	B−3
Q6008	B−3
Q6011	B−2
Q6016	B−2
Q6017	B−3
Q6018	B−2
R2A0	B−6
R2A1	B−5
R2A2	A−6
R2A4	A−5
R2A5	A−5

SYMBOL NO.	ADDRESS
R2A6	A−5
R2A7	A−5
R2A8	B−5
R2B0	B−5
R2B1	B−5
R2B2	B−5
R2B3	B−5
R2B4	B−5
R2B6	A−6
R2B7	B−1
R2B8	B−1
R2B9	B−1
R2C0	A−5
R2C1	B−5
R2C2	B−5
R2C3	B−5
R2C5	B−5
R2C6	A−6
R2C8	A−5
R2C9	A−5
R2D2	A−5
R2D3	A−6
R2D4	B−4
R2D6	B−4
R2D9	A−5
R2E2	A−6
R2E3	A−6
R2E5	A−6
R2E6	A−6
R2F2	B−4

SYMBOL NO.	ADDRESS
R2F3	B−4
R2F6	A−6
R2F9	A−6
R2G0	B−4
R2G5	B−3
R2G7	B−6
R2H2	A−6
R2H3	B−6
R2H5	A−3
R2H6	A−3
R2J2	A−6
R2J3	A−6
R2J6	B−6
R2K2	B−6
R2K4	A−4
R2K5	A−4
R2K6	A−4
R2K7	A−3
R2K8	A−4
R2K9	A−4
R2L0	A−3
R2L1	B−6
R2L9	B−5
R2M2	B−6
R2M4	B−6
R2M9	A−2
R2N3	A−4
R2N6	A−4
R2N8	A−4
R2P2	A−6

SYMBOL NO.	ADDRESS
R2P3	A−6
R2P4	A−6
R2P5	A−2
R2Q1	A−2
R2Q2	B−3
R2Q5	A−3
R2Q6	B−6
R2R0	A−2
R2R1	A−2
R2S3	B−2
R2S5	B−2
R2S6	B−2
R2S8	B−2
R2S9	B−2
R2T0	B−2
R2T9	A−5
R2U0	A−5
R2U1	A−3
R2U2	A−5
R2U3	A−4
R2U6	A−6
R2U7	A−4
R2U8	A−4
R2W2	A−2
R2W4	A−6
R2W5	A−5
R2Z2	A−4
R2Z3	A−4
R6003	B−3
R6004	B−3

SYMBOL NO.	ADDRESS
R6005	B−3
R6006	B−3
R6008	B−3
R6009	B−3
R6011	B−1
R6012	A−2
R6013	A−1
R6014	A−1
R6015	A−1
R6016	B−2
R6030	B−3
R6031	B−3
R6032	B−3
R6033	B−3
R6034	B−2
R6035	B−2
R6036	B−3
R6039	B−2
R6047	B−1
R6048	B−1
R6049	B−1
R6050	B−2
R6054	B−2
R6061	B−1
R6063	B−1
R6064	A−2
R6065	B−3
R6068	B−3
R6102	B−1
R6104	B−1

SYMBOL NO.	ADDRESS
R6105	B−1
R6106	B−1
R6108	B−1
R6109	B−1
R6111	B−3
R6203	B−1
SC	A−2
SR	A−5
SS	A−3
TP2A	A−4
TP2B	B−6
TP2C	A−4
TP2E	A−5
TP2F	A−1
TP2G	A−6
TP2J	A−2
TP2M	A−5
TP2S	A−4
TPFH	A−2
TPRC	B−2
TPSK	B−2
TPVCO	A−1
VR2A0	A−4
VR2A1	A−6
VR2A2	A−6
VR2A5	A−6
VR6000	A−1

SYMBOL NO.
X2A1

-Y/C 〔COMPONENT SIDE〕

OL	ADDRESS
	A−2
	B−2
	B−3
	B−2
	B−2
	B−6
	B−3
	B−3
	B−3
	B−3
	B−3
	A−3
	A−3
	A−3
	B−3
	A−5
	B−3
	A−2
	A−1
	A−1
	A−1
	B−4
	A−2
	B−1
	B−1
	B−2
	A−4
	B−1
	B−1
	B−4

SYMBOL NO.	ADDRESS
C2M3	B−4
C2M4	B−4
C2M5	B−4
C2N0	A−3
C2N1	A−3
C2N2	A−4
C2N3	A−3
C2N4	A−4
C2N5	B−4
C2N7	B−4
C2Q1	B−3
C2Q2	B−4
C2Q3	B−3
C2R0	A−6
C2R2	A−5
C2R3	B−5
C2R5	B−6
C2R8	B−1
C2U2	B−4
C2U6	A−5
C2W1	A−5
C6009	B−5
C6010	B−5
C6011	B−5
C6012	B−5
C6014	B−4
C6016	B−5
C6017	B−5
C6018	B−5
C6019	B−6

SYMBOL NO.	ADDRESS
C6020	B−6
C6021	B−6
C6022	B−5
C6023	A−5
C6024	A−6
C6026	A−6
C6027	A−6
C6028	A−6
C6029	B−6
C6030	B−5
C6035	B−4
C6037	B−4
C6043	B−5
C6047	B−6
C6048	B−6
C6054	A−6
C6101	B−6
C6106	B−6
C6107	B−4
D2A0	B−3
D2A1	B−2
D2A2	B−1
D2A3	B−1
D2A4	A−2
D2A5	A−2
D2A6	A−2
D6201	B−4
IC2A0	A−2

SYMBOL NO.	ADDRESS
IC6000	B−5
IC6001	A−6
L2A0	B−2
L2A1	B−3
L2A2	A−3
L2A3	B−3
L2A5	B−1
L2A6	B−1
L2A7	B−1
L2A8	B−1
L2A9	B−3
L2B0	B−3
L2B1	B−3
L2B2	B−4
L2B3	A−1
L2B5	A−4
L2B6	A−4
L2B7	B−2
L2G4	B−4
L2H0	B−2
L2H1	A−4
L2J0	A−2
L2J1	A−2
L2J2	A−4
L2J3	A−1
L2J4	A−1
L2J5	A−4
L2J6	A−4
L2J7	A−4

SYMBOL NO.	ADDRESS
L2J8	B−1
L2K1	A−1
L2N0	A−3
L2N2	A−3
L2Q2	B−1
L2Q3	B−3
L2Q5	A−6
L2Q6	B−5
L2R3	A−3
L2R4	A−1
L2S1	A−5
L2T1	B−1
L6002	B−5
L6003	B−6
L6005	B−4
L6006	B−4
L6008	A−4
L6009	B−5
L6010	B−5
L6011	B−6
L6013	B−6
L6101	B−6
L6201	B−5
L6202	B−5
LC2A1	B−3
LC6001	A−6
Q2B1	A−4
Q2B9	B−2

SYMBOL NO.	ADDRESS
Q2C0	B−3
Q2C1	B−4
Q2C2	B−6
Q2C3	A−2
Q2C6	A−4
Q2C7	A−4
Q2D0	B−3
Q2D1	A−1
Q2D2	A−1
Q2D3	A−2
Q2J3	B−2
Q2J4	B−1
Q2J5	B−2
Q2J8	A−4
Q2M0	B−1
Q2M1	A−4
Q2M2	B−5
Q2M4	A−5
Q2N0	B−5
Q2N4	B−6
Q2N5	B−6
Q2N6	B−3
Q2N8	B−2
Q2P1	B−5
Q2P2	A−5
Q2P4	B−1
Q2Q1	B−2
Q6006	B−4
Q6009	B−4
Q6013	B−6

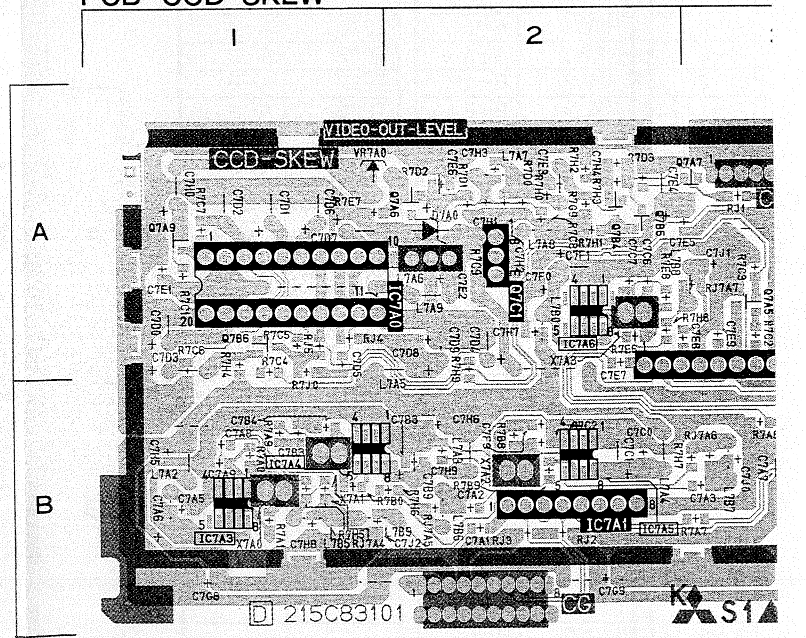
SYMBOL NO.	ADDRESS
Q6014	B−6
Q6101	B−6
Q6102	B−6
Q6201	B−5
Q6202	B−5
Q6203	A−5
R2A3	B−1
R2C4	B−3
R2C7	B−1
R2D1	A−2
R2D5	B−3
R2D7	B−4
R2E4	A−1
R2E7	A−1
R2F0	B−3
R2F1	B−3
R2F4	B−4
R2F5	A−1
R2F7	A−1
R2F8	A−1
R2G2	B−4
R2G3	B−4
R2G4	B−4
R2G6	B−3
R2H1	A−2
R2H4	B−2
R2H7	A−4
R2H8	A−4
R2H9	A−4

SYMBOL NO.	ADDRESS
R2J1	A−2
R2J7	B−2
R2J8	B−2
R2J9	B−1
R2K1	B−1
R2L2	A−4
R2L3	A−4
R2L4	A−4
R2L7	B−2
R2L8	B−2
R2M0	B−1
R2M1	B−1
R2M3	B−1
R2M5	B−1
R2M6	A−5
R2N0	A−3
R2N1	A−3
R2N2	A−3
R2N4	A−4
R2N5	A−4
R2N7	A−4
R2Q0	B−5
R2Q3	A−5
R2Q4	A−5
R2S0	B−3
R2S1	B−3
R2S4	B−5
R2S7	B−6
R2U4	B−3
R2U5	A−3

SYMBOL NO.	ADDRESS
R2W1	A−5
R2W2	A−5
R2W3	B−1
R2Z1	B−2
R6002	B−5
R6007	B−5
R6010	B−5
R6027	B−4
R6028	B−4
R6037	B−5
R6038	B−5
R6042	B−6
R6043	B−6
R6044	B−6
R6045	B−6
R6046	B−6
R6081	B−6
R6101	B−6
R6103	B−6
R6107	B−6
R6110	B−4
R6201	B−5
R6202	B−5
SC	A−5
SR	A−2
SS	A−5
TP2A	A−3
TP2B	B−1

SYMBOL NO.	ADDRESS
TP2C	A−4
TP2E	A−2
TP2F	A−6
TP2G	A−2
TP2J	A−5
TP2M	A−2
TP2S	A−3
TPFH	A−6
TPRC	B−5
TPSK	B−6
TPVCO	A−6
VR2A0	A−3
VR2A1	A−2
VR2A2	A−2
VR2A5	A−1
VR6000	A−6
X2A1	B−2

PCB−CCD SKEW



ADDRESS
B−5
A−4
A−3
B−6
B−1
B−4
B−5
A−6
B−6
A−4
A−3
B−6
B−6
A−2
B−4
B−6
A−2
B−5
B−3
B−3
B−2
B−2
B−3
B−2
B−6
B−5
A−6
A−5
A−5

SYMBOL NO.	ADDRESS
R2A6	A−5
R2A7	A−5
R2A8	B−5
R2B0	B−5
R2B1	B−5
R2B2	B−5
R2B3	B−5
R2B4	B−5
R2B6	A−6
R2B7	B−1
R2B8	B−1
R2B9	B−1
R2C0	A−5
R2C1	B−5
R2C2	B−5
R2C3	B−5
R2C5	B−5
R2C6	A−6
R2C8	A−5
R2C9	A−5
R2D2	A−5
R2D3	A−6
R2D4	B−4
R2D6	B−4
R2D9	A−5
R2E2	A−6
R2E3	A−6
R2E5	A−6
R2E6	A−6
R2F2	B−4

SYMBOL NO.	ADDRESS
R2F3	B−4
R2F6	A−6
R2F9	A−6
R2G0	B−4
R2G5	B−3
R2G7	B−6
R2H2	A−6
R2H3	B−6
R2H5	A−3
R2H6	A−3
R2J2	A−6
R2J3	A−6
R2J6	B−6
R2K2	B−6
R2K4	A−4
R2K5	A−4
R2K6	A−4
R2K7	A−3
R2K8	A−4
R2K9	A−4
R2L0	A−3
R2L1	B−6
R2L9	B−5
R2M2	B−6
R2M4	B−6
R2M9	A−2
R2N3	A−4
R2N6	A−4
R2N8	A−4
R2P2	A−6

SYMBOL NO.	ADDRESS
R2P3	A−6
R2P4	A−6
R2P5	A−2
R2Q1	A−2
R2Q2	B−3
R2Q5	A−3
R2Q6	B−6
R2R0	A−2
R2R1	A−2
R2S3	B−2
R2S5	B−2
R2S6	B−2
R2S8	B−2
R2S9	B−2
R2T0	B−2
R2T9	A−5
R2U0	A−5
R2U1	A−3
R2U2	A−5
R2U3	A−4
R2U6	A−6
R2U7	A−4
R2U8	A−4
R2W2	A−2
R2W4	A−6
R2W5	A−5
R2Z2	A−4
R2Z3	A−4
R6003	B−3
R6004	B−3

SYMBOL NO.	ADDRESS
R6005	B−3
R6006	B−3
R6008	B−3
R6009	B−3
R6011	B−1
R6012	A−2
R6013	A−1
R6014	A−1
R6015	A−1
R6016	B−2
R6030	B−3
R6031	B−3
R6032	B−3
R6033	B−3
R6034	B−2
R6035	B−2
R6036	B−3
R6039	B−2
R6047	B−1
R6048	B−1
R6049	B−1
R6050	B−2
R6054	B−2
R6061	B−1
R6063	B−1
R6064	A−2
R6065	B−3
R6068	B−3
R6102	B−1
R6104	B−1

SYMBOL NO.	ADDRESS
R6105	B−1
R6106	B−1
R6108	B−1
R6109	B−1
R6111	B−3
R6203	B−1
SC	A−2
SR	A−5
SS	A−3
TP2A	A−4
TP2B	B−6
TP2C	A−4
TP2E	A−5
TP2F	A−1
TP2G	A−6
TP2J	A−2
TP2M	A−5
TP2S	A−4
TPFH	A−2
TPRC	B−2
TPSK	B−2
TPVCO	A−1
VR2A0	A−4
VR2A1	A−6
VR2A2	A−6
VR2A5	A−6
VR6000	A−1

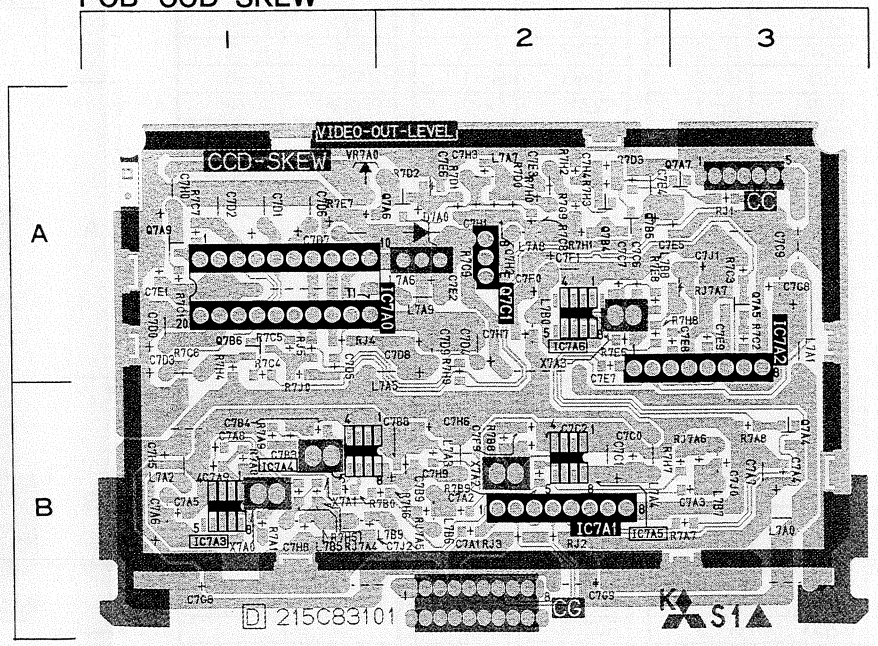
SYMBOL NO.	ADDRESS
X2A1	B−6

ADDRESS
A−2
B−2
B−2
B−1
B−1
A−4
A−4
A−4
B−2
B−2
B−1
B−1
B−1
B−1
A−5
A−3
A−3
A−3
A−4
A−4
A−4
B−5
A−5
A−5
B−3
B−3
B−5
B−6
B−3
A−3

SYMBOL NO.	ADDRESS
R2W1	A−5
R2W2	A−5
R2W3	B−1
R2Z1	B−2
R6002	B−5
R6007	B−5
R6010	B−5
R6027	B−4
R6028	B−4
R6037	B−5
R6038	B−5
R6042	B−6
R6043	B−6
R6044	B−6
R6045	B−6
R6046	B−6
R6081	B−6
R6101	B−6
R6103	B−6
R6107	B−6
R6110	B−4
R6201	B−5
R6202	B−5
SC	A−5
SR	A−2
SS	A−5
TP2A	A−3
TP2B	B−1

SYMBOL NO.	ADDRESS
TP2C	A−4
TP2E	A−2
TP2F	A−6
TP2G	A−2
TP2J	A−5
TP2M	A−2
TP2S	A−3
TPFH	A−6
TPRC	B−5
TPSK	B−6
TPVCO	A−6
VR2A0	A−3
VR2A1	A−2
VR2A2	A−2
VR2A5	A−1
VR6000	A−6
X2A1	B−2

PCB−CCD SKEW



PCB-CCD SKEW

SYMBOL NO.	ADDRESS
C7A1	B−2
C7A2	B−2
C7A3	B−3
C7A4	B−3
C7A5	B−1
C7A6	B−1
C7A7	B−3
C7A8	B−1
C7A9	B−1
C7B3	B−1
C7B4	B−1
C7B8	B−2
C7B9	B−2
C7C0	B−2
C7C1	B−2
C7C2	B−2
C7C6	A−2
C7C7	A−2
C7C8	A−3
C7C9	A−3
C7D0	A−1
C7D1	A−1
C7D2	A−1
C7D3	A−1
C7D4	A−2
C7D5	A−1
C7D6	A−1
C7D7	A−1
C7D8	A−2
C7D9	A−2

SYMBOL NO.	ADDRESS
C7E1	A−1
C7E2	A−2
C7E3	A−2
C7E4	A−2
C7E5	A−3
C7E6	A−2
C7E7	A−2
C7E8	A−3
C7E9	A−3
C7F0	A−2
C7F1	A−2
C7F9	B−2
C7G8	B−1
C7G9	B−2
C7H0	A−1
C7H1	A−2
C7H2	A−2
C7H3	A−2
C7H4	A−2
C7H5	B−1
C7H6	B−2
C7H7	A−2
C7H8	B−1
C7H9	B−2
C7J0	B−3
C7J1	A−3
C7J2	B−1
CC	A−3
CG	B−2

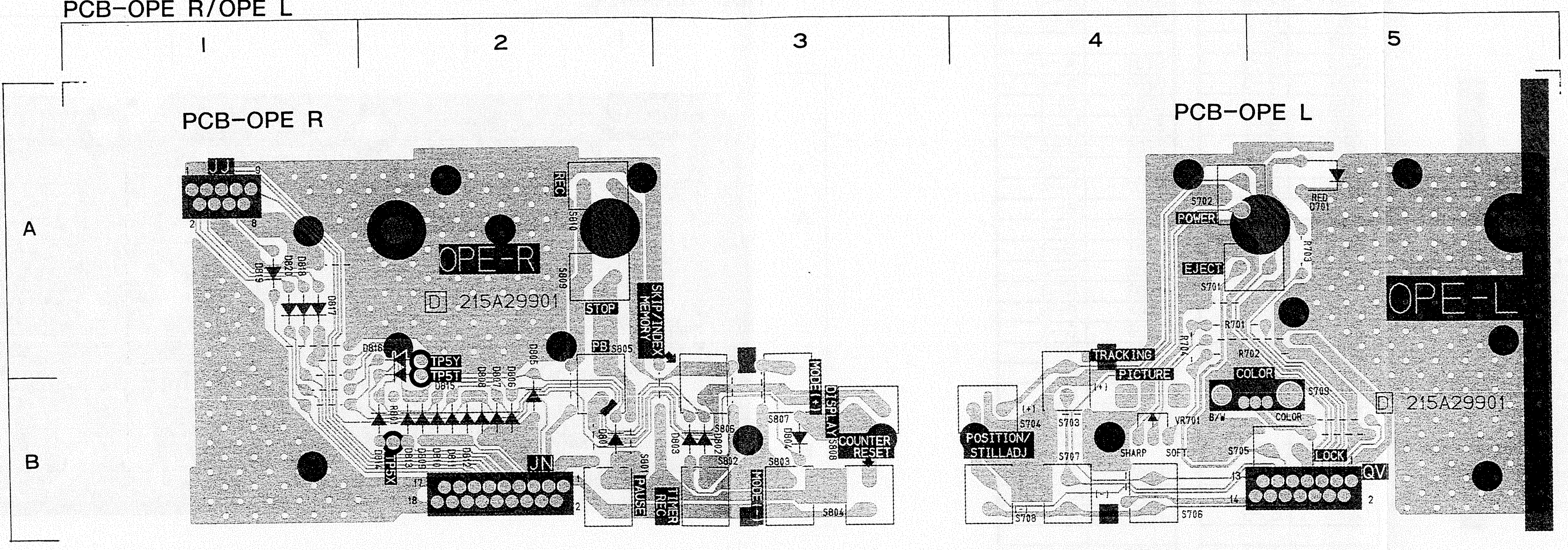
SYMBOL NO.	ADDRESS
D7A0	A−2
IC7A0	A−1
IC7A1	B−2
IC7A2	A−2
IC7A3	B−1
IC7A4	B−1
IC7A5	B−2
IC7A6	A−2
L7A0	B−3
L7A1	A−3
L7A2	B−1
L7A3	B−2
L7A4	B−2
L7A5	A−2
L7A6	A−2
L7A7	A−2
L7A8	A−2
L7A9	A−2
L7B0	A−2
L7B5	B−1
L7B6	B−2
L7B7	B−3
L7B8	A−3
L7B9	B−2
Q7A4	B−3
Q7A5	A−3

SYMBOL NO.	ADDRESS
Q7A6	A−2
Q7A7	A−3
Q7A9	A−1
Q7B4	A−2
Q7B5	A−2
Q7B6	A−1
Q7C1	A−2
R7A0	B−1
R7A1	B−1
R7A7	B−3
R7A8	B−3
R7A9	B−1
R7B0	B−1
R7B8	B−2
R7B9	B−2
R7C1	A−1
R7C2	A−3
R7C3	A−3
R7C4	B−1
R7C5	A−1
R7C6	A−1
R7C7	A−1
R7C8	A−2
R7C9	A−2
R7D0	A−2
R7D1	A−2
R7D2	A−2
R7D3	A−2
R7E6	A−2

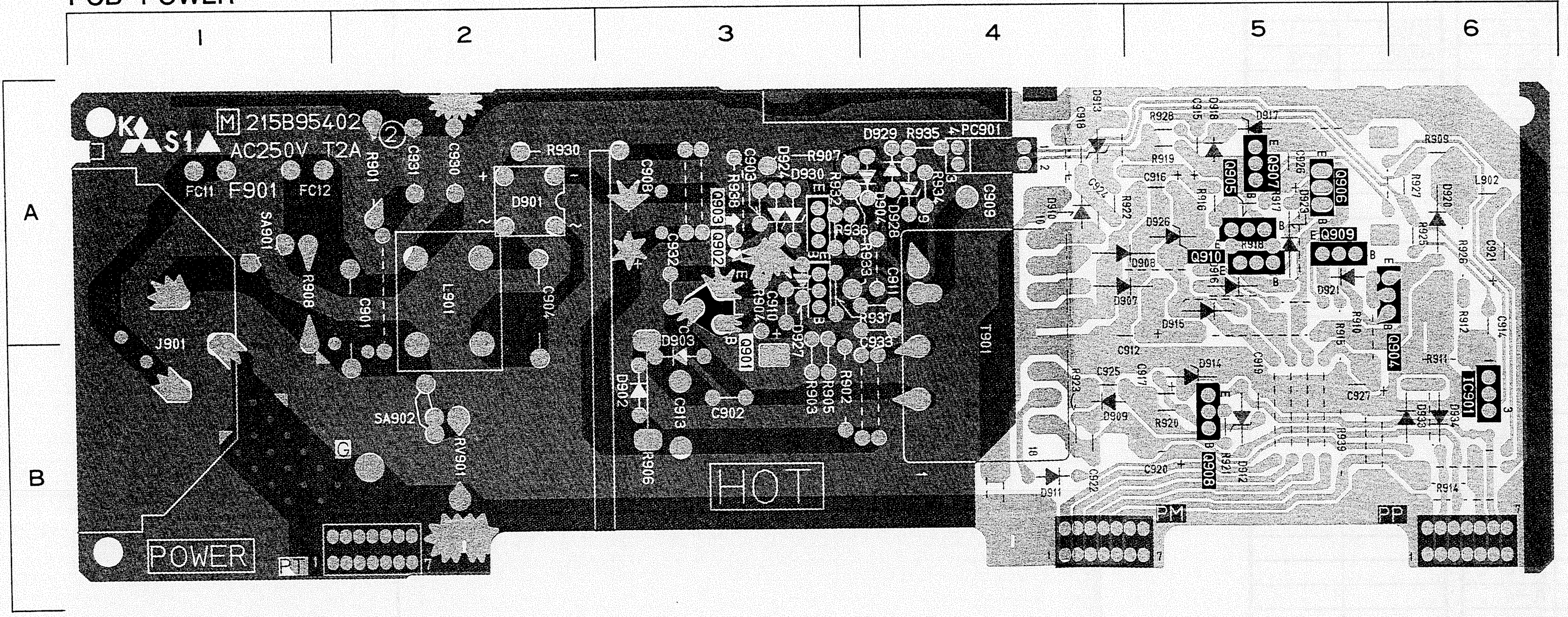
SYMBOL NO.	ADDRESS
R7E7	A−1
R7E8	A−2
R7G9	A−2
R7H0	A−2
R7H1	A−2
R7H2	A−2
R7H3	A−2
R7H4	A−1
R7H5	B−1
R7H6	B−2
R7H7	B−3
R7H8	A−2
R7H9	A−2
R7J0	B−1
RJ1	A−3
RJ2	B−2
RJ3	B−2
RJ4	A−1
RJ5	A−1
RJ7A4	B−1
RJ7A5	B−2
RJ7A6	B−3
RJ7A7	A−3
VR7A0	A−1
X7A0	B−1
X7A1	B−1
X7A2	B−2

SYMBOL NO.	ADDRESS
X7A3	A−2

PCB-OPE R/OPE L


1
2
3
4
5
A
B
PCB-OPE R
PCB-OPE L
JJ
OPE-R
215A29901
REC
STOP
SKIP/INDEX MEMORY
PB
TP5Y
TP5T
TP5X
JN
PAUSE
TIMER REC
MODE(-)
MODE(+)
DISPLAY
COUNTER RESET
POWER
EJECT
OPE-L
TRACKING
PICTURE
COLOR
POSITION/STILLADJ
SHARP
SOFT
LOCK
QV
RED D701

PCB-POWER


1
2
3
4
5
6
A
B
215B95402
AC250V T2A
F901
FC11
FC12
J901
SA901
SA902
RV901
L901
D901
T901
PC901
HOT
POWER
PT
PM
PP
IC901

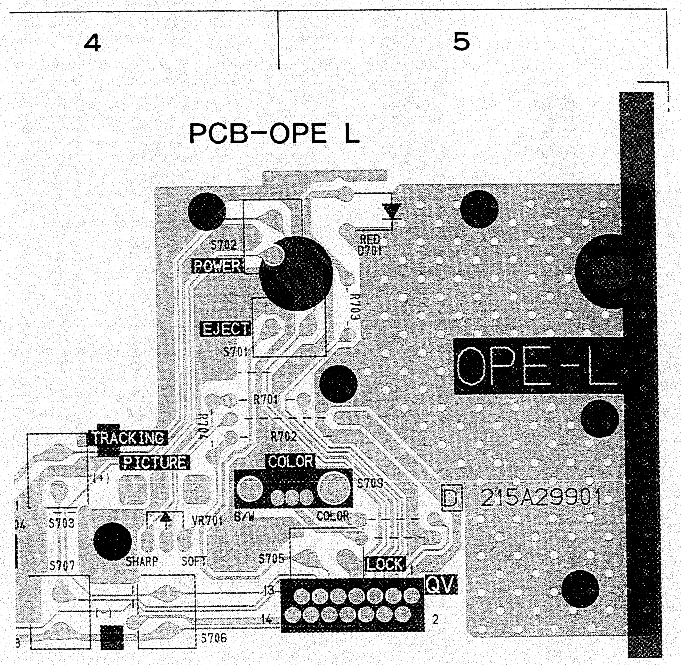
PCB-OPE R/OPE L

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDR
D701	A—5	R704	B—4
D801	B—2	R801	B—2
D802	B—3		
D803	B—3	S701	A—4
D804	B—3	S702	A—4
D805	B—2	S703	B—4
D806	B—2	S704	B—4
D807	B—2	S705	B—5
D808	B—2	S706	B—4
D809	B—2	S707	B—4
D810	B—2	S708	B—4
D811	B—2	S709	B—4
D812	B—2	S801	B—2
D813	B—2	S802	B—3
D814	B—1	S803	B—3
D815	B—1	S804	B—3
D816	A—1	S805	B—2
D817	A—1	S806	B—3
D818	A—1	S807	B—3
D819	A—1	S808	B—3
D820	A—1	S809	A—2
		S810	A—2
JJ	A—1		
JN	B—2	TP5T	B—2
		TP5X	B—2
QV	B—5	TP5Y	A—2
R701	A—4	VR701	B—4
R702	A—5		
R703	A—5		

PCB-POWER

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	S
C901	B—2	D903	B—3			R906	B—3	
C902	B—3	D904	A—4	IC901	B—6	R907	A—4	RV
C903	A—3	D907	A—5			R908	B—2	
C904	B—2	D908	A—5	J901	B—1	R909	A—6	SA
C908	A—3	D909	B—4			R910	B—5	SA
C909	A—4	D910	A—4	L901	A—2	R911	B—6	
C910	A—3	D911	B—4	L902	A—6	R912	B—6	T9
C911	A—4	D912	B—5			R914	B—6	
C912	B—5	D913	A—5	PC901	A—4	R915	B—5	
C913	B—3	D914	B—5			R916	A—5	
C914	B—6	D915	A—5	PM	B—4	R917	A—5	
C915	A—5	D916	A—5	PP	B—6	R918	A—5	
C916	A—5	D917	A—5	PT	B—2	R919	A—5	
C917	B—5	D918	A—5			R920	B—5	
C918	A—4	D920	A—6	Q901	A—3	R921	B—5	
C919	B—5	D921	A—5	Q902	A—3	R922	A—5	
C920	B—5	D923	A—5	Q903	A—3	R923	B—4	
C921	A—6	D924	A—3	Q904	A—6	R925	A—6	
C922	B—4	D926	A—5	Q905	A—5	R926	A—6	
C924	A—5	D927	A—3	Q906	A—5	R927	A—6	
C925	B—5	D928	A—4	Q907	A—5	R928	A—5	
C926	A—5	D929	A—4	Q908	B—5	R930	A—3	
C927	B—6	D930	A—3	Q909	A—5	R932	A—4	
C930	A—2	D933	B—6	Q910	A—5	R933	A—4	
C931	A—2	D934	B—6			R934	A—4	
C932	A—3			R901	A—2	R935	A—4	
C933	A—4	FC11	A—1	R902	B—4	R936	A—4	
		FC12	A—2	R903	B—3	R937	A—4	
D901	A—2			R904	A—3	R938	A—3	
D902	B—3	G	B—2	R905	B—3	R939	B—5	

PCB-OPE L

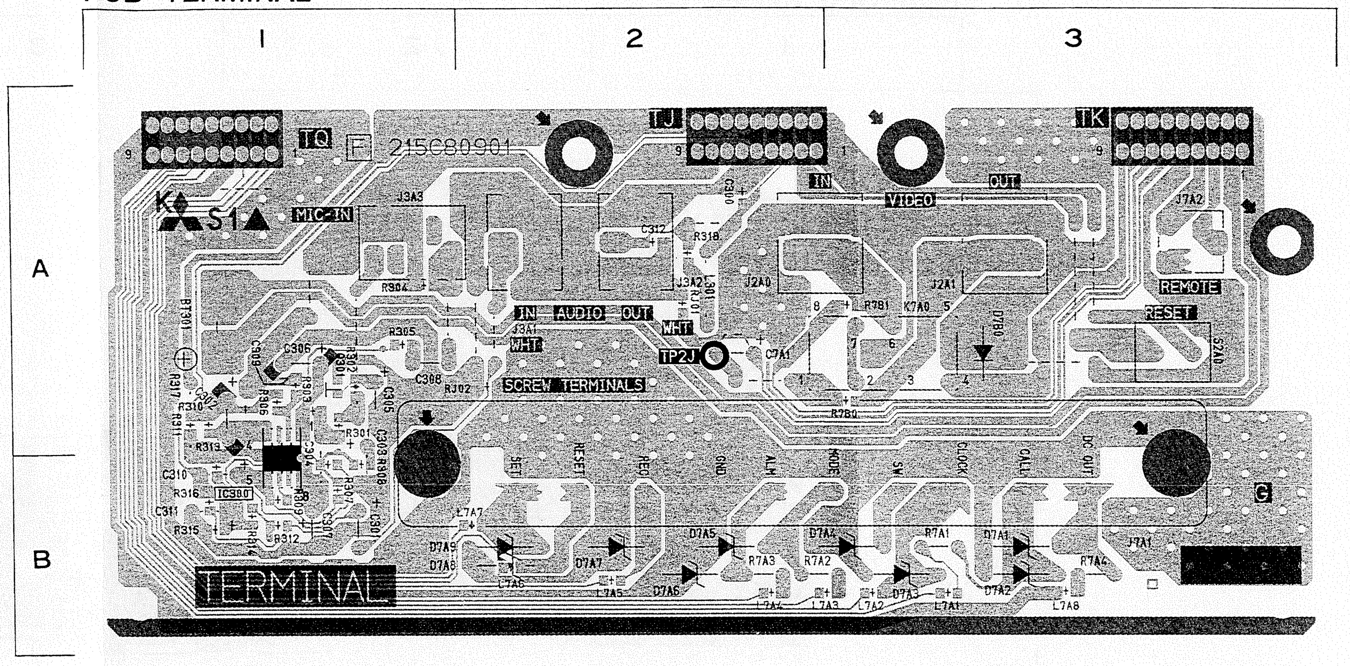

4
5
S702
POWER
EJECT
S701
RED D701
R703
R701
R702
R704
TRACKING
PICTURE
COLOR
S709
B/W
COLOR
VR701
S703
S707
SHARP
SOFT
S705
S706
LOCK
QV
OPE-L
215A29901
D

PCB-OPE R/OPE L

SYMBOL NO.	ADDRESS
D701	A—5
D801	B—2
D802	B—3
D803	B—3
D804	B—3
D805	B—2
D806	B—2
D807	B—2
D808	B—2
D809	B—2
D810	B—2
D811	B—2
D812	B—2
D813	B—2
D814	B—1
D815	B—1
D816	A—1
D817	A—1
D818	A—1
D819	A—1
D820	A—1
JJ	A—1
JN	B—2
QV	B—5
R701	A—4
R702	A—5
R703	A—5

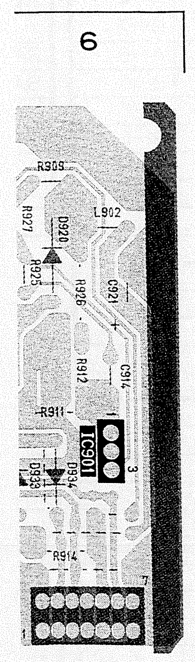
SYMBOL NO.	ADDRESS
R704	B—4
R801	B—2
S701	A—4
S702	A—4
S703	B—4
S704	B—4
S705	B—5
S706	B—4
S707	B—4
S708	B—4
S709	B—4
S801	B—2
S802	B—3
S803	B—3
S804	B—3
S805	B—2
S806	B—3
S807	B—3
S808	B—3
S809	A—2
S810	A—2
TP5T	B—2
TP5X	B—2
TP5Y	A—2
VR701	B—4

PCB-TERMINAL


1
2
3
A
B
TQ
F
215C80901
TJ
TK
K
S1
MIC-IN
IN
VIDEO
OUT
REMOTE
RESET
IN AUDIO OUT
WHT
TP2J
SCREW TERMINALS
TERMINAL
G
BT301
IC300
C7A1
D7B0
J7A1
J7A2

PCB-TERMINAL

SYMBOL NO.	ADDRESS
BT301	A—1
C300	A—2
C301	B—1
C302	A—1
C303	B—1
C304	B—1
C305	A—1
C306	A—1
C307	B—1
C308	A—1
C309	A—1
C310	B—1
C311	B—1
C312	A—2
C7A1	A—2
D7A1	B—3
D7A2	B—3
D7A3	B—3
D7A4	B—3
D7A5	B—2
D7A6	B—2
D7A7	B—2
D7A8	B—2
D7A9	B—2
D7B0	A—3
IC300	B—1


6
R905
L902
R927
D920
R925
R926
C921
R912
C914
R911
IC901
D930
D934
R914

PCB-POWER

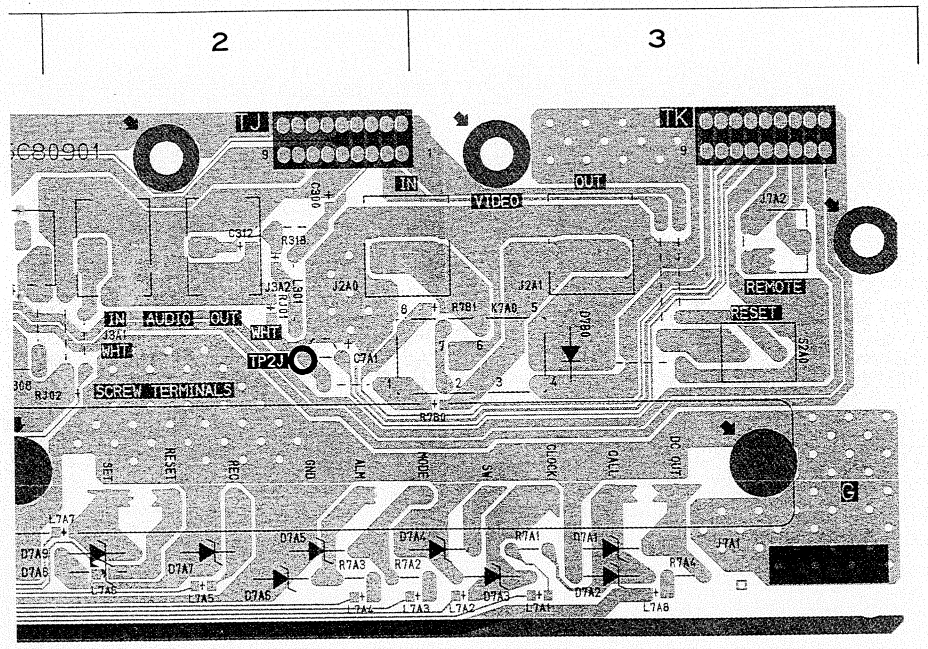
SYMBOL NO.	ADDRESS
C901	B—2
C902	B—3
C903	A—3
C904	B—2
C908	A—3
C909	A—4
C910	A—3
C911	A—4
C912	B—5
C913	B—3
C914	B—6
C915	A—5
C916	A—5
C917	B—5
C918	A—4
C919	B—5
C920	B—5
C921	A—6
C922	B—4
C924	A—5
C925	B—5
C926	A—5
C927	B—6
C930	A—2
C931	A—2
C932	A—3
C933	A—4
D901	A—2
D902	B—3

SYMBOL NO.	ADDRESS
D903	B—3
D904	A—4
D907	A—5
D908	A—5
D909	B—4
D910	A—4
D911	B—4
D912	B—5
D913	A—5
D914	B—5
D915	A—5
D916	A—5
D917	A—5
D918	A—5
D920	A—6
D921	A—5
D923	A—5
D924	A—3
D926	A—5
D927	A—3
D928	A—4
D929	A—4
D930	A—3
D933	B—6
D934	B—6
FC11	A—1
FC12	A—2
G	B—2

SYMBOL NO.	ADDRESS
IC901	B—6
J901	B—1
L901	A—2
L902	A—6
PC901	A—4
PM	B—4
PP	B—6
PT	B—2
Q901	A—3
Q902	A—3
Q903	A—3
Q904	A—6
Q905	A—5
Q906	A—5
Q907	A—5
Q908	B—5
Q909	A—5
Q910	A—5
R901	A—2
R902	B—4
R903	B—3
R904	A—3
R905	B—3

SYMBOL NO.	ADDRESS
R906	B—3
R907	A—4
R908	B—2
R909	A—6
R910	B—5
R911	B—6
R912	B—6
R914	B—6
R915	B—5
R916	A—5
R917	A—5
R918	A—5
R919	A—5
R920	B—5
R921	B—5
R922	A—5
R923	B—4
R925	A—6
R926	A—6
R927	A—6
R928	A—5
R930	A—3
R932	A—4
R933	A—4
R934	A—4
R935	A—4
R936	A—4
R937	A—4
R938	A—3
R939	B—5

SYMBOL NO.	ADDRESS
RV901	B—2
SA901	A—1
SA902	B—2
T901	B—4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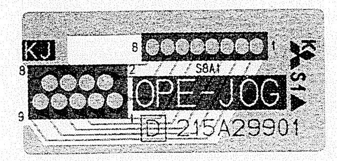
3
TJ
TK
IN
VIDEO
OUT
J2A0
J2A1
J7A2
IN
AUDIO
OUT
WHT
TP2J
C7A1
R7B1
K7A0
D7B0
REMOTE
RESET
S2A0
SCREW TERMINALS
SET
RESET
REC
ONE
ALM
MODE
ON
CLOCK
CALL
DC OUT
G

PCB-TERMINAL

SYMBOL NO.	ADDRESS
BT301	A−1
C300	A−2
C301	B−1
C302	A−1
C303	B−1
C304	B−1
C305	A−1
C306	A−1
C307	B−1
C308	A−1
C309	A−1
C310	B−1
C311	B−1
C312	A−2
C7A1	A−2
D7A1	B−3
D7A2	B−3
D7A3	B−3
D7A4	B−3
D7A5	B−2
D7A6	B−2
D7A7	B−2
D7A8	B−2
D7A9	B−2
D7B0	A−3
IC300	B−1
J2A0	A−2
J2A1	A−3
J3A1	A−2
J3A2	A−2
J3A3	A−1
J7A1	B−3
J7A2	A−3
K7A0	A−3
L301	A−2
L7A1	B−3
L7A2	B−3
L7A3	B−2
L7A4	B−2
L7A5	B−2
L7A6	B−2
L7A7	B−2
L7A8	B−3
Q301	A−1
R301	A−1
R302	A−1
R303	A−1
R304	A−1
R305	A−1
R306	A−1
R307	B−1
R308	B−1
R309	B−1
R310	A−1
R311	A−1
R312	B−1
R313	B−1
R314	B−1
R315	B−1
R316	B−1
R317	B−1
R318	A−2
R7A1	B−3
R7A2	B−2
R7A3	B−2
R7A4	B−3
R7B0	A−3
R7B1	A−3
RJ01	A−2
RJ02	A−2
S2A0	A−3
TJ	A−2
TK	A−3
TP2J	A−2
TQ	A−1

PCB-OPE-JOG


KJ
S8A1
S1A
OPE-JOG
215A29901